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ABSTRACT

The Chipley Project was initiated to ascertain if PPBS procedures developed in establishing a private school mathematics curriculum could be applied to a public school social studies curriculum. This document reports the experiences of the Chipley Middle School teachers involved in the project. The project focused primarily on creating, implementing, and evaluating the behavioral objectives of the school's instructional program and incorporated a cost effectiveness analysis of instructional expenditures. Project evaluators found that the PPBS procedures were easily utilized in a public school setting and that the experience justified the costs as well as the extension of this instructional system to other schools and subject areas. (RA)

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THE CHIPLEY REPORT

A Replication of PPBS Pilot Study Procedures and Documents in the Chipley Middle School Social Studies Department

Project Director: Martin T. Green

Project Coordinators: Elizabeth S. Cunningham
Ned B. Lovell

December 31, 1970

EA 003 640

PREFACE

The University School, The Florida State University, in cooperation with Washington County public schools and the State Department of Education has attempted to replicate procedures and documents developed for the University School Program Planning Budgeting System Project, to determine if these procedures and documents would be applicable in a public school setting. The selected site for this replication was the Chipley Middle School, Chipley, Florida.

In addition to the immediate objective mentioned above, it must be stressed that the ultimate goal or desired outcome of the implementation of PPBS procedures in these or any educational settings is to decentralize decision-making in programming and budgeting, by placing a great deal of emphasis on decision-making by the classroom teacher. The project staff feels that work at this level is essential if changes in education are to occur.

The PPBS teams from the University School and Washington County have worked in the spirit of cooperation characteristic of their professional status. Through tireless effort they have contributed, beyond requirement and expectation, not only within the delimitation of this project, but to the expansion of the area of educational information as well. I would like to acknowledge these people and numerous others who contributed their talent and time on behalf of this project.

The University School PPBS Team:

Mrs. Elizabeth Cunningham, Project Coordinator

Miss Helen Deans, Social Studies Department Coordinator and Team Chairman

Mr. Henry Garland, Math Department Coordinator

Mr. John Healy, Department of Educational Research, The Florida State University

Mr. Ned Lovell, Project Coordinator

Mrs. Betty Martyn, Fiscal Assistant

The Chipley PPBS Team:

Mr. William Bridenback, Ninth Grade World Geography Teacher

Mrs. Nellie Gardner, Seventh Grade American History Teacher

Mrs. Shirley Presley, Sixth Grade Geography Teacher

Mr. Ronald Savelle, Social Studies Department Coordinator, Team Chairman and Eighth Grade Civics Teacher

Mrs. Lucy Waller, Sixth Grade Geography Teacher

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Mr. J. Dekle Milton, Panhandle Area Educational Cooperative, Chipley, Florida

Mr. J. B. Ward, Supervisor, Washington County Board of Public Instruction

Mr. Lee Young, Business Manager, Tallahassee Community College

Further, I would like to express a debt of gratitude to Dr. Al Lowe, Superintendent of Public Instruction, Washington County, whose leadership and support were indispensible to the project, and to Mr. Ned Lovell and Mrs. Elizabeth Cunningham, Project Coordinators, who planned and organized the project, synthesized the data and prepared this document.

Martin T. Green
Project Director

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CHAPTER I

INTRODUCTION

During the year 1969, the University School, The Florida State University, had been the site of a feasibility study of PPBS at the school center level. This project was financed by the Elementary and Secondary Education Act of 1965, Title V, Section 503, P.L. 89-10. The school was awarded, through Wakulla County, a grant of $14,077.00 to develop a PPB system for the University School. It soon became apparent, however, that this would be a massive task that might very well take four or five years and many thousands of dollars that were not available. Furthermore, it was generally agreed by the project staff and the funding agency that the project should be delimited as much as possible in order to insure a quality product. Depth, not breadth, was the aim.

Therefore, it was decided to develop the processes and the procedures for one discipline as a pilot study. Such a study would greatly facilitate future expansion to other disciplines. As a result, the first year of the University School PPBS project was concerned only with their mathematics program. Since mathematics is one of the easiest areas to evaluate and program, it was chosen as the point of departure. However, the project staff was optimistic about expansion to other areas after undergoing the experience of the pilot study.

At this point, it must be stressed that the University School took a unique approach to PPBS. Although the PPB system

is usually seen as a tool for high level decision making, the emphasis in the University model (see Figure 1) is to increase the impact of teachers and students on the decision-making process. The assumption is that this is the only way to bring about real change and the only way to insure intelligent educational decisions.

The major achievements of the 1969 project were:

1. The development of a program structure for the University School.
2. The development of procedures and documents for cost-analysis of instructional programs.
3. The conceptual development of an Instructional Management System.
4. The exploration of the role of behavioral objectives in PPBS.
5. The development of procedures to assess the relevance of instructional activities to school objectives.
6. The exploration and utilization of methods to evaluate non-academic objectives of the school.
7. The involvement of teachers in the planning and programming process.

The progress made during the first year led to the continuation of funding. Subsequently, the project staff set the following two major goals for its second year of operation:

A. To expand the model developed for the mathematics program to all disciplines taught at the University School.

B. To check the validity of University School procedures and documents in a public school setting and preferably in another discipline.

To fulfill the requirements of the latter goal, cooperation was secured with the Washington County School Board, and the Washington County Superintendent designated Chipley Middle School as the site of the study and Social Studies as the area of concentration. To insure articulation with the local high school, the ninth grade social studies teacher was

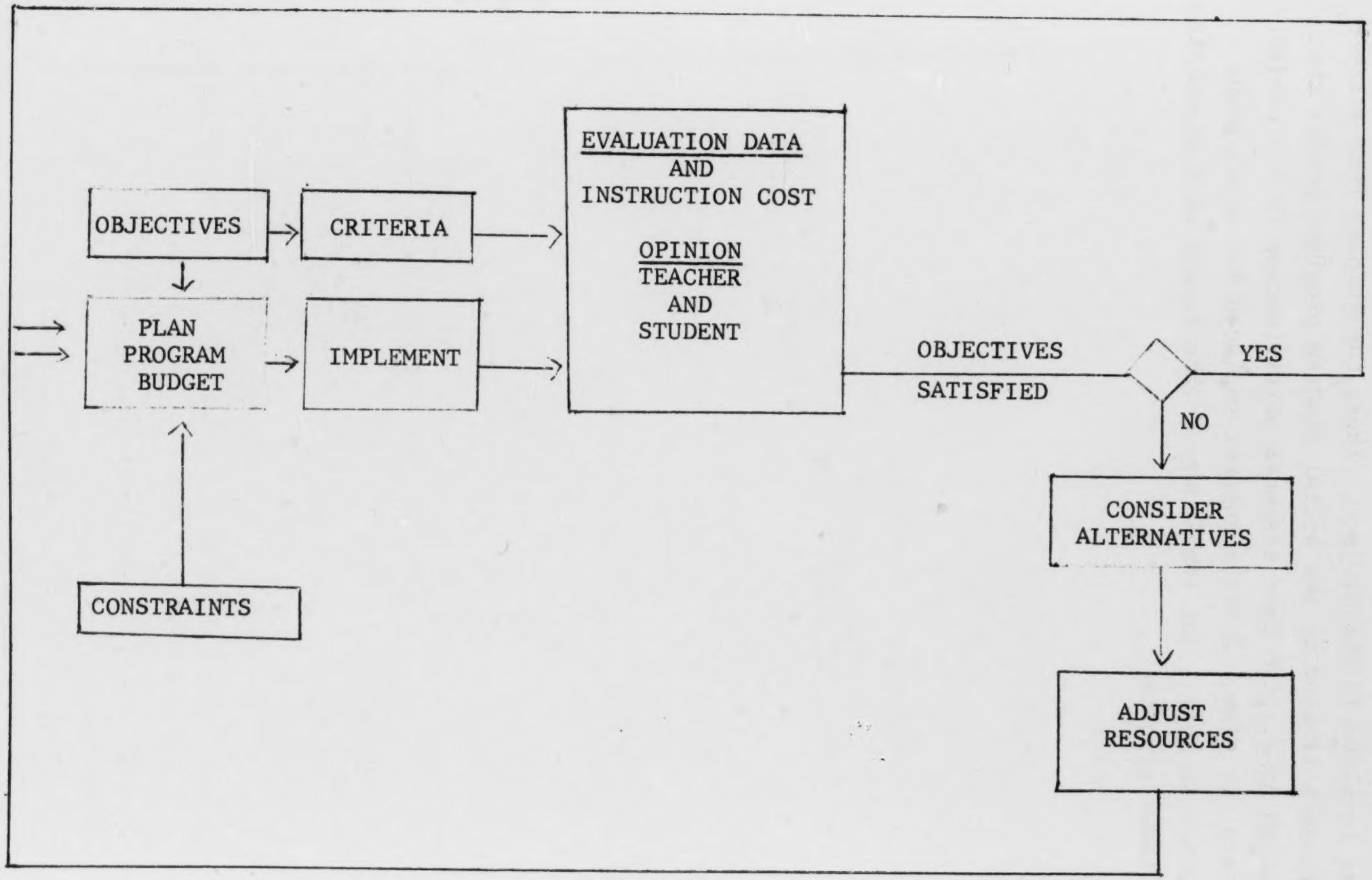

Fig. 1.--University School Model

also involved in the project. Thus, the Chipley PPBS activities were limited to the social studies program, grades six through nine, with four teachers participating in the project at any one time. A fifth teacher replaced the sixth grade teacher in July. The remainder of this report is a discussion of their efforts.

CHAPTER II

PPBS: AN INTRODUCTION

This report would not be complete without an overview of PPBS. The Chipley Project was not intended to be a fully implemented system. As explained in the introduction, this project was established to see if the University School procedures, formerly developed, were applicable in a public school. The report would have little meaning to many, unless an overview of PPBS were also included.

Misconceptions

There are many misconceptions about PPBS. Listed below are four things which PPBS is not.

PPBS is not:

a) a substitute for the experience of the decision-maker

b) decision making by computer

c) limited to budgeting and cost accounting

d) merely an effort to reduce public spending[1] (PPBS is neutral on the issue of cost reduction. The goal is to receive the most possible output for the resources expended rather than merely accepting the cheapest bid.)

Objectives of PPBS

Past experience has shown that American people will spend money for governmental services in which they believe,

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[1]Cited from a Seminar on District Involvement in PPBS (Sacramento, California: California State Department of Education, Advising Commission on School District Budgeting and Accounting, 1969), p. 2.

if they have faith in the organization managing these services. However, many people have lost faith in school management. As a possible solution to this problem, the following objectives of PPBS have been cited below:

1. To contribute to better and broader public understanding of the allocation and use of public funds. ("Accountability" requires that educators justify their expenditures.)
2. To facilitate analysis, forecasting and planning.
3. To make the budget a more useful and precise instrument for planning, appropriation, administration and control.[1]

If PPBS can fulfill the objectives outlined above, much of this faith could be restored. This would lead one to conclude that educators should carefully study the feasibility of PPBS.

Because the PPB system has been so recently introduced into the educational sector, local districts should be cautious of large-scale investments in machinery, materials, and personnel over the next few years. Experience indicates that the first step should be involvement and orientation. Careful selection of limited problem areas such as the cost accounting aspect, or instructional planning could then be made and investigated without major expense. No major expense should be incurred until the State Planning Commission and the State Department of Education are in full agreement as to the direction Florida PPBS should take. This should not lead one to conclude that local districts should do nothing for the time being. There are many facets of the PPBS process that have merit on their own and should be implemented even if PPBS did not exist.

The PPBS applications conducted by Chipley school teachers are a case in point. Their activities were conducted

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[1]Arthur Smithies, "A Conceptual Framework for the Program Budget," Memorandum, RM-4271-RC (Santa Monica, California: The Rand Corporation, September, 1964), Preface, p. iii.

at little expense, and hopefully, the experience improved their professional capabilities and the instructional program. These teachers can now play a leadership role when, and if, PPBS becomes more widespread.

Local school districts would be wise to monitor the developments at Chipley, the University School, and Dade County. The progress and mistakes of those involved in such projects should facilitate PPBS development in other districts, and because PPBS is complex and expensive, every effort should be made to profit from their experiences.

Benefits of PPBS to classroom teachers:

Hopefully, the strength of educational PPBS will be the increase of teacher influence on policy, planning, programming and budgeting. This will not take place however, unless administrators and board members encourage teachers to participate in a meaningful way. Teachers, like anyone else, are resentful of participation that results in ignored recommendations.

PPBS vs. PPBES:

You may be puzzled about the distinction between these two terms. Planning-Programming-Budgeting and Planning-Programming-Budgeting-Evaluation Systems are essentially the same thing. Some people make "evaluation" explicit in order to highlight its importance. There is no difference in meaning however.

The many models of PPBS:

It is well to recognize that there are many different types of PPBS. As a frame of reference, however, one might cite the following essential aspects of the systematic analysis that is characteristic of the PPB system.

1. Careful specification and systematic analysis of objectives.
2. Search for relevant alternative means of attaining the objectives. (Only feasible alternatives are considered.)
3. Estimation of total costs of each alternative (initial and future).
4. Estimation of effectiveness of each alternative and determination of probability of satisfying the objective.
5. Comparison and analysis of alternatives.
6. Choice of alternatives that promise greatest effectiveness for given resources, in achieving the objectives.[1]

Some school districts stress the importance of budgeting reform at the district level and have accomplished little else. Other models stress the evaluation aspect, cost analysis or teacher involvement. This reflects value judgments and the fact that implementation of a total PPB system is such a long-range task that no one has yet developed all the component parts. While this makes it difficult to evaluate PPBS for education, it appears that those districts that have implemented component parts have all decided that it is logical to take those components that are most meaningful (to them) and develop them before moving on to other components. An overall view of PPBS will allow such development without major disruption when, and if, all components are developed.

Misuses of PPBS

A. The fact that numbers and possibly advanced technical procedures are used does not automatically lead to valid conclusions. Poor data, incorrectly used data, and even purposely manipulated data can result.

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[1]Planning and Budget Commission and the Legislative Auditors, Planning and Budgeting, A Seminar on Planning and Budgeting Concepts for Florida (Tallahassee, Florida: November, 1968), citing Henry Rowan.

B. As with most formal systems and procedures, there is the danger that the PPB system will begin to be treated as an end in itself and not simply a means to provide better information to decision-makers. An overly rigid set of procedures and rules for the system can result in problems which PPBS should avoid. For example, PPBS is intended to encourage new ideas and innovations: analysis organizations which are permitted to become too insulated from operational personnel may cause a reduction of the flow of ideas.

C. Also, a tendency in the operation of PPBS is to delay final decisions until substantive information is made available. Realistic, timely scheduling of the analysis process is needed to avoid inadvisable delays in decision-making.

D. Finally, there is the danger that too many decisions on "minor" issues, decisions which should appropriately be made at lower levels of the government, may revert to the upper levels. This will adversely affect agency initiative and administrative efficiency.[1]

The educator is also worried about the misuse of evaluative information about teachers and courses. Since PPBS requires data about effectiveness, it is only natural that many teachers will seize this as justification for resistance to the PPBS process. It is suggested that this resistance can be best met by involving teachers in the process of developing evaluative criteria. Most people don't object to being evaluated if they help to determine the criteria for evaluation.

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[1]Harry P. Hatry, Consideration in Instituting a "Planning-Programming-Budgeting" System (PPBS) in State and Local Government (Washington, D.C.: George Washington University, 1966), p. 2.

CHAPTER III

A COMPARISON OF THE PROGRAM PLANNING BUDGET SYSTEM WITH TRADITIONAL METHODS OF SCHOOL FINANCE IN WASHINGTON COUNTY

The major sources of income for the school budget of Washington County are the ad valorem tax of ten mills, Minimum Foundation funds allotted according to the state formula based on Average Daily Attendance, a special tax on racing collected by the Racing Commission for education, and funds from the Federal government for special programs authorized by ESEA, COP, NDEA, LIFT, EDPA, and others. In 1969 the Minimum Foundation funds amounted to approximately $1,861,317, local taxes yielded approximately $348,107, and Racing Commission funds were about $165,000. Federal funds amounted to about $850,000.

The County School Superintendent recommends the budgetary distribution of the funds to the County School Board which makes the final decisions on budget matters. The funds are divided among the two elementary schools, two high schools, one junior high school, and one vocational-technical school in the county according to needs and legal restrictions. They are allocated into eight expenditure classifications as required by state law--administration, instruction, operation of plant, maintenance of plant, auxiliary services, fixed charges, capital outlay, and debt service. Expenditures against the individual school's budget originate in the principal's office and are approved by the school board.

At Chipley Junior High School funds budgeted for consumable teaching supplies are divided equally among the

teachers who requisition supplies to be charged against them, with the Principal's approval. An Instructional Aid's fee of $4 per child also is charged to help defray the cost of consumable supplies. It is deposited to internal accounts and supplies requisitioned by the teacher with the Principal's approval are charged against it.

The traditional school budget is expenditure-oriented and serves primarily as an accounting control rather than a planning tool. There is very little relation between funds allocated and program goals except in the special program funds such as EIE and Vocational-Technical funds, and no objective evaluation of cost efficiency in terms of educational goals.

In contrast to the traditional school budget such as Washington County uses, a Program Planned Budget System emphasizes curriculum planning and relates financial expenditures to educational goals. It aids long-range decision making and makes a form of educational cost accounting possible. Using systems analysis of inputs and outputs, cost efficiency can be evaluated in terms of educational objectives. Although still unproved, it is hoped that implementation of PPBS will allow school funds to be allocated by program needs. These seem to be its major advantages.

The disadvantages of implementing PPBS at the school level are the tremendous changes required in accounting procedures, the lack of trained personnel to make them, and the large volume of data necessary to support the program. While the desirable outcome of increased teacher involvement in financial planning is accomplished, it is effected by a considerable increase in teacher work load, for the teacher must furnish cost data, write behavioral objectives for educational goals, and provide soft data such as results of student opinion questionnaires and teacher evaluation of

teaching unit effectiveness. It will probably require a good deal of in-service education and released time to gain the approval of teachers.

Mrs. Shirley Presley

CHAPTER IV

OVERVIEW OF THE CHIPLEY PROJECT

The first meeting between project staff and Chipley school personnel took place on February 11, 1970. Four Chipley social studies teachers were involved in the project: Mrs. Nellie Gardner, Mrs. Lucy Waller, Mr. Ronald Savelle, and Mr. William Bridenback. These teachers had four major goals as they entered into this project:

1. To learn how to write performance objectives.
2. To meet state accreditation standards.
3. To improve the scope and sequence of the social studies program.
4. To improve the teaching of geography skills.

An attempt was made to integrate the desires of the Chipley teachers with the objectives of the University School PPBS proposal.

The courses, number of sections, and number of students taught by each teacher are shown below:

1969-70

Grade Level	Name of Course	No. of Sections	No. of Students	Teacher
Sixth	The Changing Old World	5	130	Waller
Seventh	American History	5	160	Gardner
Eighth	Civics	5	161	Savelle
Ninth	World Geography	6	141	Bridenback

At the end of the 1969-70 school year Mrs. Waller moved and was replaced by Mrs. Shirley Presley.

On the basis of standardized test results, the Chipley teachers previously had decided to: (1) increase geography instruction, and (2) emphasize the disciplines rather than the multi-disciplinary approach. Prior to the February kickoff of this project, they had decided to offer the following courses:

Sixth Grade - Geography of Lands Overseas
Seventh Grade - American History
Eighth Grade - Civics
Ninth Grade - World Geography

The Chipley teachers had concluded that these areas of studies would help solve the greatest shortcoming of the students, the lack of geographic skills.

The flow chart, Figure 2, outlines the various tasks included in the Chipley Project. These tasks are in compliance with the ESEA Title V proposal. (See Appendix A.) Some steps were eliminated, but only after consultation with the Chipley teachers. Those eliminated were not central obligations of this project, and generally were not undertaken because of the lack of time and total school commitment to the project (e.g., no attempt was made to develop a program structure for Chipley Junior High because only one department was released to work on this project.)

Explanation of Flow Chart

1. Orientation

Only one day was scheduled for this. However, because of the participants' limited experience with the unique philosophical and practical concepts involved in applying the PPB system at the classroom level it took many

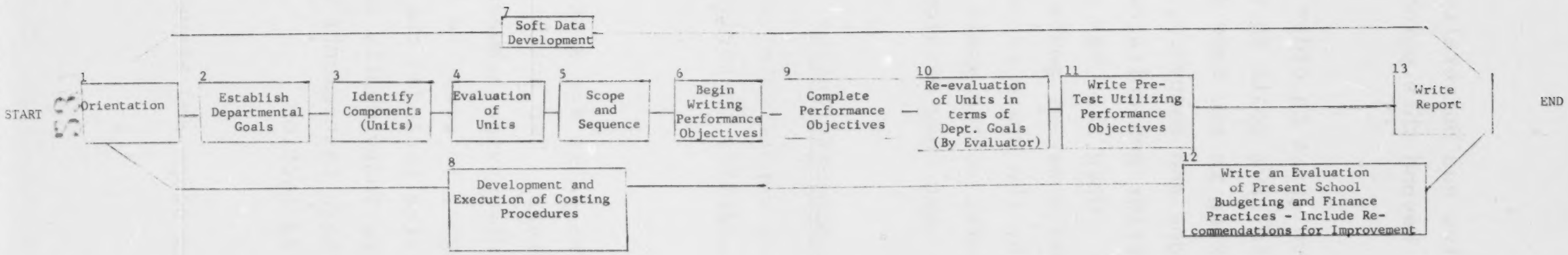

Fig. 2.--Chipley Flow Chart

meetings before the Chipley and University School personnel were prepared to proceed beyond this point.

2. Departmental Goals

Teachers must have goals in order to make rational plans. Departments should have goals so that all teachers will be consistently working in the same direction. Finally, in order to develop a scope and sequence, departments should have goals so that activities and units can be screened for relevance and continuity. Once this was realized, the Chipley teachers developed a set of goals. They largely adopted those suggested by the State Accreditation Standards, but they debated every point so the goals shown on page , Chapter V, are the goals that they developed and are committed to.

3. Identification of Components (Units)

After establishing departmental goals, the next step was for each teacher to identify tentative units (components). (See Chapter V.)

4. Evaluation of Units

The theory of PPBS calls for activities to be relevant to goals and objectives. Two activities were conducted to generate thought and discussion between teachers about what units should be taught, in order to attain or approach their goals. The activities included the use of rating scales by which units were individually considered, relative to the defined goals. These instruments will be discussed in detail in the following section.

5. Scope and Sequence

A clearly defined scope and sequence for course

development emerged subsequent to the identification and evaluation of component (units) at each grade level. This is presented in the form of a detailed outline for each course, at consecutive grade levels.

6. Begin Writing Performance Objectives

Since a precise definition of instructional goals or objectives is basic to a PPB system, this was one of the most essential aspects of teacher planning. Within the framework of the established scope and sequence and identified components for each course, specific performance objectives could be formulated. Several training sessions were devoted to this activity and a comprehensive report of the procedures will be included in the next section.

7. Soft Data Development

As one means of measuring "output," soft data instruments were developed in order to evaluate non-academic objectives. In this instance, a social studies attitude scale was the one selected for the evaluation of student attitudes. This instrument and its role in the total evaluation will be discussed further.

8. Costing Process

This process was first formulated in the pilot study at the University School and the resulting procedures and instruments were tested as part of the Chipley Project. Extensive training, detailed instruction and modified worksheets facilitated the completion of this phase of the system, and minimal time and effort were expended by those involved.

9. Completion of Performance Objectives

Writing performance objectives is necessarily a

time consuming, ongoing process and was pursued for the duration of the Chipley activities until the completion and submission of the objectives for the first unit or work. The participants plan to continue with this task until objectives are written for all course components.

10. The Re-evaluation of Units in Terms of Departmental Goals

This will be one procedure that the project evaluator will utilize as a means of determining the potential of the proposed units for meeting departmental goals and for recommendations in this area.

11. Writing of Pre-Tests Utilizing Performance Objectives

In order to implement an instructional program based on performance objectives, it is essential to develop such an instrument for the analysis of student entry behavior and evaluation of instruction in terms of the objectives (by means of a similar post-test). These instruments were submitted for each course or unit and will be presented later in the report.

12. Writing Evaluation of Present School Budgeting and Finance Practices

This evaluation will provide the basis for comparison of the traditional budgeting practices to those of the PPBS. Such a comparison might afford a more effective means for determining the efficiency of each and for making recommendations for improving budgetary procedures.

In summary, a feasibility study will be conducted to decide, on the basis of time and cost of PPBS, if any of the procedures might be implemented to improve the school fiscal practices existing under the traditional budgetary procedure presently in operation.

CHAPTER V

APPLICATION OF PPBS PROCEDURES TO INSTRUCTIONAL ASPECTS OF THE SCHOOL PROGRAM

In the preceding chapter, a brief overview of the project, including various steps in the flow chart, was presented. In this section, the discussion will be expanded and will include detailed descriptions of each of the previously mentioned PPBS procedures that applies to the instructional aspect of the program. In following chapters, the subjects of costing, etc., will be further discussed.

Setting Goals

The initial step of any PPB system is one of planning. This step is of ultimate importance since it is the basis for the entire system and determines the direction of the programming and budgeting phases. Planning involves setting goals and specifying objectives. Thus, the starting point for the development and implementation of this system is the setting of goals.

The Chipley participants undertook this as their primary task. Because the project was limited to the area of social studies and lacked total school involvement, they selected the State Accreditation Standards as a point of departure. After extensive discussion, they revised these to suit their individual situation and adopted the following list of goals. As indicated, the goals include those for all grade levels in the social studies area.

CHIPLEY JUNIOR HIGH SCHOOL - Grades 6-9

Goals for Social Studies:

a. To enable students to acquire a body of knowledge about man and society.

b. To help students gain an understanding of the geographic environment of man and how he adapts himself to his environment and modifies it to meet his needs.

c. To help students conceptualize the cultural structure and the behavior of people in many societies.

d. To help students understand how man governs himself, to learn to participate in self government, and to assume the responsibilities of citizenship.

e. To help students perceive how societies function in attempting to meet their economic needs and wants and to understand the role of the individual as a decision maker in our economic system.

f. To help students comprehend how men develop effective and responsible societal behavior.

g. To help students learn and use study skills and inquiry skills that provide a tool for acquiring knowledge and linking knowledge to behavior.

h. To help the students become conscious of different values and attitudes that contribute to American cultures; and to develop value systems consistent with individual needs and with the constant growth and development of our cultures.

i. To help students understand that attitudes are part of behavioral patterns which incline individuals to react in certain ways; and to know that school experiences can help to organize and redirect attitudes already acquired and aid in the development of attitudes that lead to desired behavior patterns.

j. To help students develop an awareness of vocational opportunities and how school experiences are directly related to individual's opportunity as a social and economic member of society.

k. To help each student attain the optimal social, emotional, and intellectual growth and development within his capacity.

Scope and Sequence

By definition, such goals indicate broad direction and general purpose or intent. Obviously, they merely establish a framework within which the specific, operational objectives of an instructional program must be formulated. To this end, several intermediate activities were undertaken.

In order to define objectives, the scope and sequence of the social studies curriculum was first identified by the following procedures:

1. Identification of Components (Units)
2. Evaluation of Units
3. Stipulation of Scope and Sequence

The objectives of these procedures were: a) to reduce duplication of effort, b) to improve articulation, and c) to eliminate irrelevant topics (relevancy determined in terms of departmental goal-attainment).

Although these are simple tasks, they are potentially useful in improving departmental articulation and reducing duplication of effort. One of the basic principles of PPBS and modern management in general, is that all activities should be justified in terms of their contribution of organizational goals and objectives.

Scope and Sequence Worksheets were used to list the proposed units of study in each course. These units usually followed the textbook content and were quite broad. They were sequenced and given a relevance priority rating in terms of the defined goals.

Table 1 (Form E-1), on the following page was then distributed to each teacher for a more precise rating of each of the units to be taught during the 1970-71 academic year.

The rating scale used is set up as follows:

TABLE 1

TEACHER EVALUATION OF COMPONENTS (UNITS)
(CHIPLEY)

ELEMENT Social Studies

SUB-ELEMENT World Geography

TEACHER Bridenback

Grade 9th

Ability Group Heterogeneous

COMPONENTS (Units)	SOCIAL STUDIES GOALS										
	a	b	c	d	e	f	g	h	i	j	k
1. Orientation: The Small World of Man	3	4	3	1	1	2	4	1	2	1	1
2. The Four Worlds: Introduction	4	5	3	1	1	4	4	1	2	1	2
3. The Atmosphere	5	5	1	1	1	1	4	1	1	1	2
4. The Aquasphere	5	5	1	1	1	1	4	1	1	1	2
5. The Geosphere	5	5	1	1	1	1	4	1	1	1	2
6. The Biosphere	5	5	1	1	1	1	4	1	1	1	2
7. The Revolution in Ecology	5	5	2	2	1	3	5	4	4	1	5
8. Environment versus Technology	5	5	1	3	3	3	5	5	4	2	5
9. Man in a New Environment: A Theoretical Study	5	5	1	1	3	3	5	4	4	3	5
10. Environment in Transition	5	5	1	1	2	3	5	4	4	1	5
11. The New Universe of Man: Scientific Theories	5	5	1	1	2	4	5	4	5	3	5

1 2 3 4 5

*Unit cannot be used to meet this Instructional Program Objective.

Unit is of great use in meeting this Instructional Program Objective

(The teacher should complete one of these forms for each class taught.)

FORM E-1
Deposition. Department Chairman & PPBS Coordinator

*Component = Unit

1 2 3 4 5

Component cannot be used to meet Departmental goal — Component is of great use in meeting this Departmental goal

This is considered to be an important screening device, since all activities should contribute toward satisfaction of departmental goals. If the units are inappropriate, they might be dropped. Obviously, if a teacher consistently rates a unit as "1", serious thought should be given to its elimination. Annual evaluation should help eliminate units that do not contribute to goal-achievement.

After each teacher completed Form E-1, the forms were studied by the departmental chairman for possible duplication. Duplication may sometimes be necessary, but should be justified.

Form E-3 was provided to the chairman for comment on the effects of the teacher evaluation of units relative to improving articulation, reducing duplication of effort and elimination of irrelevant topics. A completed copy of this form (Table 2) is shown as an example.

TABLE 2

RESULTS OF TEACHER EVALUATION OF COMPONENTS (UNITS)

DEPARTMENT Social Studies CHAIRMAN Savelle YEAR 1969-70

1. Did the evaluation task uncover any unnecessary duplication of effort within your department? (Please discuss briefly.)

   Yes. Certain areas of study were found to be repeated in each of the four years involved whereas, some areas were completely left out, i.e., the U.S. Constitution, American Presidents, etc.

2. Please state duplicated units (which are justified) and where the duplication exists and why you feel that the duplication is necessary or justified.

We are duplicating geographic skills in 6th and 9th grades. This, we feel, is necessary for reinforcement. Also, skills in the 9th will be more difficult. As the program moves into the fourth year, hopefully most map study work can be eliminated from 9th course of study.

3. Were you able to improve articulation after this effort? (Discuss briefly.)

   Prior to this program, there was little to no communication among social studies teachers. At present, all four teachers involved are aware of their particular responsibilities in the total scope and sequence. This should eliminate gaps and duplication.

4. Were you able to compare units with chairmen of related disciplines?

   Yes [ ] No [XX] (Check one.)

5. Did the inter-departmental comparison uncover any unnecessary duplication of effort? (Explain.)

6. Did you find and eliminate any non-relevant topics? (Explain briefly.)

7. This exercise was [XX] or was not [ ] (check one) of value to our Department?

8. Please explain briefly your answer to number 7.

   We found the instrument used for evaluation very helpful. It pointed out some weaknesses in meeting our goals and these were corrected before work on our activities began.

9. This type of evaluation should be of value in the public schools.

Yes [XX] No [ ] (Check one)

10. Please explain briefly your answer to number 9.

We feel that we were not unique in our situation of lack of communication and lack of a sequential program. We feel the instrument mentioned in #8 should be used by every department in every school.

FORM E-3
Deposition: PPBS Coordinator

As a result of these preliminary activities, the broad educational goals were closely associated with more precise instructional components. Using these components, the scope and sequence of each course and consequently, of the entire department was specifically prescribed. The following outlines were submitted by each grade level and represent the end product of these efforts.

Outline for 6th Grade Geography

I. Exploring Our Earth: The Study of Earth Forms
   A. The Oceans
      1. Names, size and locations
      2. Currents
      3. Effect on climate
   B. The Land Masses
      1. The continents
      2. Land forms in general
         a. Mountains
            (1) Formation of volcanos, folded, and fault-block mountains
            (2) Types of rocks and soils
         b. Plains
         c. Valleys
         d. Deserts
         e. Jungles

II. Sharing Our Discoveries

A. Map Skills

1. Interpretation of map symbols
2. Knowledge of longitude and latitude
   a. Time zones
   b. Seasons
3. Divisions of hemispheres
4. Definitions of geographical terms such as peninsulas, canals, etc.
5. Recognition of various types of maps

B. Report and Research Techniques

1. Library skills
   a. Encyclopedias
   b. Atlas
   c. Dictionary
   d. Periodicals
2. Report form

III. Exploring the World of Early Man

A. How Early Man Survived by Using His Surroundings

1. Discovery of fire
2. Use of tools
3. Development of transportation

B. Building Civilizations Through Knowledge of His Surroundings

1. Methods of Archaeology
2. Contributions of the Sumerian, Hebrew, Greek, Egyptian and Roman civilizations
   a. Alphabet and writing materials
   b. Religion
   c. Government
   d. Tools and machines

C. Adapting to different environments

IV. Exploring the Middle East: Egypt, Israel, Jordan and Syria

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

V. Exploring Northern Europe: Scandinavia

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

VI. Exploring East Central Africa: Kenya, Uganda, Zambia and Tanzania

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

VII. Exploring the Far East: Japan

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

VIII. Exploring the South Pacific: Australia

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

IX. Exploring South America: Brazil

A. Physical Aspects
B. Climatic Conditions
C. Population
D. Transportation
E. Industry
F. Agriculture

U. S. HISTORY

7th Grade

I. Exploration and Discovery

A. Events that led to discovery
B. Exploratory voyages
C. Colonization

II. American Revolutionary War

A. Causes
B. Effects
C. Results

III. Setting up a New Government

A. Declaration of Independence
B. Constitution
C. Political Parties
D. Leaders
E. Jeffersonian Period

IV. Life and Society in the Young Nation

A. American inventions
B. How they affected the growth of our young nation
C. Westward movement

V. Immigration and a Study of Ethnic Group's Contribution to American Society

(Case Studies)

A. Indian
B. Oriental
C. Negro

VI. The Civil War

A. Causes
B. Effects
C. Results

VII. A Nation Rebuilds

A. A New South
B. Problems of Reconstruction
C. Our Nation Re-United

OUTLINE FOR 8TH GRADE CIVICS

I. The Role of the Federal Government in American Society Today

- A. The Federal Constitution
- B. The Congress
- C. The Presidency
- D. Federal Courts
- E. Political Parties

II. Impact of Non-Federal Governments on Your Life

- A. Student Government
- B. County Government
- C. City Government
- D. State Government

III. Citizenship - Duties and Privileges

- A. Voting and Elections
- B. Social Institutions in our Society
- C. Rights of Citizenship

IV. You and Our Economic System

- A. Our American Economic System
- B. Taxes and Governmental Finance
- C. Money, Credit, and Banking
- D. Agriculture Business, and Labor

V. U. S. and World Affairs

- A. The United Nations
- B. Major U. S. Documents of Foreign Policy
- C. Major Alliances
- D. Peacekeeping

VI. Present and Future Problems

- A. Pollution
- B. Population
- C. Urbanization
- D. Careers

OUTLINE FOR 9th GRADE WORLD GEOGRAPHY

I. Orientation: The Small World of Man

- A. Basic Introduction
- B. Working as a Geographer
- C. Basic Area Studies
- D. Film Introductions to Different Land Masses and Oceans

II. The Four Worlds: Introduction

A. Earth Area Studies
B. The Four Worlds
C. Contrasting Cultures and Value Systems

III. The Atmosphere

A. What is an Atmosphere?
B. How it came to be.
C. What is the makeup of air?
D. Weather and Climate
1. General Weather Patterns
2. Hurricanes and other Violent Storms

IV. The Aquasphere

A. The World of Water
1. The Oceans and Seas
2. The Currents

B. The Effects of the Oceans on Life and the Weather

V. The Geosphere

A. Land Masses
B. Land Forms
C. Interior of the Earth
D. Volcanoes

VI. The Biosphere

A. The Environment and Living Things
B. Variety of Environments and Their Life Forms
C. Man - The Primary Consumer

VII. The Revolution in Ecology

A. A Changing Environment
1. The City World
Megalopolis - U.S.A.
2. The Human Bee-Hive
3. Human Adaptability

B. Man Against his Environment

VIII. Environment <u>versus</u> Technology

A. Let's Pave the World
B. Cover the Earth with Cities
C. Machines, Machines and more Machines
D. The Polluted World
1. Causes
2. Effects
3. Possibilities

IX. Man in a New Environment: A Theoretical Study

A. Revolution in Technology
B. Revolution in Biology
C. Revolution in City Planning
D. Life in Revolution

X. Environment in Transition

XI. The New Universe of Man: Scientific Theories

Performance Objectives

As previously mentioned in the overview of the Chipley Project, performance objectives stated in behavioral terms play a most essential role in this PPBS model. They not only provide a significant source of data for program evaluation, but also serve as a major factor for instructional planning by the teachers.

The completion of the task of identifying components (units) of study and specifying a complete scope and sequence for each course established the major premise for the statement of objectives at the operational level. Because the Chipley participants had limited experience with performance objectives, several training sessions were devoted to providing the required background information. The process was initiated by distributing copies of Mager's Preparing Instructional Objectives[1] to the participants. It was felt that this publication would serve as an adequate guide in conjunction with resource persons and supplementary materials. An example of one of the models used for additional instruction is presented in Table 3. This model was developed by the University School team.

After the basic introduction to performance objectives, the Chipley participants undertook the task of

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[1]Robert F. Mager, Preparing Instructional Objectives (Palo Alto, California: Fearon Pub., Inc., 1962).

TABLE 3

SAMPLE BEHAVIORAL OBJECTIVE

To develop in students an awareness of the economic interdependence of nations as demonstrated by writing an essay, using any available reference material, in which they identify the contributions made by various countries to the process that produces an article, chosen from a teacher-made list, that is offered for sale in a U.S. department store, without any error as to fact, or omission of major contributions.

general objective	To develop in students an awareness of the economic interdependence of nations.
behavior statement	as demonstrated by writing an essay... ...in which they identify the contributions made by various countries to the process that produces an article... ...that is offered for sale in a U.S. department store.
important conditions	using any available reference material ...chosen from a teacher-made list
evaluation procedure	(evaluation procedure implied: grading an essay paper)
performance criteria	without any error as to fact, or omission of major contribution

...as determined by writing an essay, using only reference materials provided by the teacher, in which they correctly identify at least one action taken by each of three teacher-specified nations in response to a specified major change in U.S. foreign policy.

...as shown by listing for each of the teacher-specified nations the major product which they ship to the United States, with at least 80% accuracy.

writing sample objectives. The form "Objective Check List," Table 4, was developed to facilitate this procedure. The format assures the inclusion of all three steps taken to compose a performance objective and also provides several criteria by which the statements might be evaluated. The participants used this work sheet and formulated several sample objectives that served as a basis for group study (discussion, constructive criticism, revision, etc.).

The participants committed themselves to the completion of performance objectives for their first unit of instruction for Fall, 1970. Samples of their products are shown in Appendix C. This work is to be continued throughout the school year. The objectives for each course will be distributed to all members of their department in order to improve vertical articulation and to reduce duplication of content and effort.

Instructional Activities and Materials

Development of instructional materials and activities based on the performance objectives was limited because of the time factor. It is presumed that this will be a continued, ongoing activity, for the statement of objectives is a futile effort if it does not provide the foundation for instruction.

A few examples of proposed activities follow. The example submitted by the eighth grade civics instructor is part of a learning package developed by him in the workshop "Developing UNIPAC." This type of component includes all necessary elements of the self-directed study concept such as pre-test, objectives, activities, materials, post-tests, etc.

TABLE 4

OBJECTIVE CHECK LIST

STEP I: Define the general Objective.	
A. Does the student need to reach this objective?	_____
B. Is the general objective subject to one and only one interpretation?	_____
C. Is this objective sufficiently delimited to permit measurable accomplishment?	_____
STEP II: State the behavior expected of the student.	
A. Is the specific task stated?	_____
B. Is the task subject to one and only one interpretation?	_____
C. Are the important conditions under which the behavior occurs specified?	_____
STEP III: Identify the Evaluative procedure.	
A. Would all readers agree as to what the evaluative procedure is?	_____
B. Is the minimum performance level specified?	_____
C. Does this procedure measure accomplishment of the objective?	_____

6th Grade Geography

Activities for Unit 1

I. A. The oceans

1. Globe Study - Locate 4 oceans on a globe, list their names and at least 2 continents that each one touches.

2. Adopt a Ship - Class writes letters to the Captain and crew of a ship assigned to them by a sponsoring organization and follows its route over the world.

3. Trace Currents - Show the courses of the Gulf Stream, the Japanese Current, and the Labrador Current by drawing directional arrows on a teacher-given map.

4. Plot the courses of September hurricanes on a hurricane map.

B. The Land Masses

1. Map Study - Label the seven continents on a teacher-given map and categorize them into larger and smaller continents.

2. Identification of Landforms - Label a series of pictures of representative landforms.

3. Group demonstrations of the processes of mountain formation with layers of clay representing the earth.

4. Examination of a rock collection with lecture by rock collector followed by class discussion.

5. Field trip or slide lecture on limestone caverns at Marianna to view cave formation.

8th Grade Civics

Identification Page

Title:

The Bill of Rights Is For You.

Producer:

Ronald Savelle
1218 Waukesha
Bonifay, Florida 32425

Production Location:

Workshop - Developing UNIPACs
Chipley High School
Chipley, Florida 32428
June 1 - 5, 1970

Production Consultant:

Gardner Swenson

Subject:

Social Studies - Civics

Performance Level:

Middle School

Purpose:

To assist the student to relate life experiences to the Bill of Rights.

Statement of Idea

I. Major Idea, Skill, or Attitude to be learned

The Bill of Rights Protects You.

II. Component Ideas, Skills, or Attitudes

1. Where you will find your rights stated
2. What your rights are
3. How these rights affect you

Learning Objectives

1. You will be able to write the location of the Bill of Rights.
2. You will be able to list the freedoms given by the Bill of Rights.
3. Given a life situation you will be able to tell the right that relates to that situation.

THIS SECTION FOR STUDENT USE

THE BILL OF RIGHTS IS FOR YOU

Pre-Evaluation

The purpose of the pre-evaluation is to assist you and the teacher to decide if you need to finish this UNIPAC or continue to another lesson. You will not get a grade on this quiz.

1. Our basic rights are granted by our state constitution. True, False
2. The Bill of Rights is found in the Declaration of Independence. True, False
3. Rights in criminal cases is one of the Bill of Rights. True, False
4. The right to move from state to state is guaranteed by the Constitution. True, False
5. The rights of the states is written into the Constitution. True, False
6. Freedom of religion means we have the right to believe or not believe in religion. True, False
7. There is an amendment to our U.S. Constitution which prohibits excessive punishment in court cases. True, False
8. The first 10 amendments to the U.S. Constitution is our Bill of Rights. True, False
9. Give an example of the right of due process of law.
10. Give an example of other rights not written.

Answers Pre-Test

1. False
2. False
3. True
4. False
5. True
6. True
7. True
8. True

9-10. Answers will vary.

LESSON I

Component: 1. Where you will find your rights stated.

2. What your rights are.

Objective: 1. You will be able to write the location of the Bill of Rights.

2. You will be able to list the freedoms given in the Bill of Rights.

Instructions: Choose from the following list of activities only those that will help you pass the self test at the end of the lesson. If you pass go on to Lesson II. If you fail try other activities.

LEARNING ACTIVITIES

READ: pages 54 - 61, Civics for Americans.

LISTEN: to tapes prepared or lecture by teacher.

DISCUSS: with another student to see if you can name the rights.

LOOK: at filmstrip, "Our Bill of Rights."

BUILD: a list of rights not found in the Bill of Rights.

WRITE: a list of the Bill of Rights.

SELF-EVALUATION: 1. Write the location of the Bill of Rights.

2. List the Bill of Rights.

Answers to Self-Test

1. The first 10 amendments to the United States Constitution.
2. I. Religion, speech, press, assembly, petition
   II. Bear Arms
   III. Quartering of Soldiers
   IV. Search
   V. Due Process of Law
   VI. Rights in Criminal Cases
   VII. Jury Trial in Civil Cases
   VIII. Excessive Punishment
   IX. Other Rights Not Written
   X. Rights of States

LESSON II

Component: How these rights affect you.

Objective: Given a life situation you will be able to tell the right that relates to that situation.

Instructions: Choose from the following list of activities only those which will help you pass the self-test. If you pass ask the teacher for your post-test. If you do not pass continue other activities.

LEARNING ACTIVITIES

READ: Chapter III, Civics for Americans

LISTEN: to tape or lecture prepared by teacher.

CREATE: situations which are related to each right and play that role.

DISCUSS: with a small group some situations related to each right.

SEE: filmstrips "The Constitution", "The Bill of Rights"

WRITE: A number of situations which are related to the Bill of Rights.

INSTRUCTIONS: Name one or two rights guaranteed by our Bill of Rights that would prevent each of the following from happening in our country.

SELF-EVALUATION:

1. The police went into Joe's house and took all his guns.
2. Tom was sentenced to having both arms cut off ten years after the crime.
3. The judge told Jim to answer the question "Did you help commit the crime?"
4. I went to the Methodist Church last Sunday because it is the only church in our city.
5. The soldiers stayed at our house for a week.
6. The judge without a jury awarded $1000 to Mr. Smith for liable.
7. You don't have the right to drive because it is not listed in the Bill of Rights.

8. Jane cannot keep up with the news because the police closed the newspaper office.

Answers:

1. Freedom from search, Right to bear arms.
2. Unusual punishment, Rights in criminal cases.
3. Due process of law.
4. Freedom of Religion.
5. Quartering of troops.
6. Jury trial in civil cases.
7. Unenumerated rights.
8. Freedom of press.

Quest Opportunities

1. Do you think that these human rights are guaranteed in other countries?
2. Of a world standard of human rights would Law Fund offer a program?

THIS SECTION FOR TEACHER USE

Instruction to the Teacher

I. Identification of Learners.

This UNIPAC is designed for middle school students in American History or Civics, depending on scope and sequence.

II. Equipment needed:

A. Filmstrip previewer and/or projectors.

B. Tape recorder and players.

C. Filmstrip.

Post-Test

I. Where are the guaranttes of our basic human rights found?

II. Indicate the right which would apply to each situation.

1. Tom bought his license and went hunting.
2. The afternoon T.V. news was part of our Civics assignment.
3. Mr. Jones was paid $1000 for his land that was part of the new highway right of way.
4. The Supreme Court ruled Florida's sales tax to be legal.
5. Mr. Smith can move to Texas to take a better job.
6. The jury awarded damages of $500 to Mr. James.
7. The trial of Mrs. Brown was held in Washington County, Florida since the crime was committed there.
8. The National Guard camped in the public square.
9. There are fifteen churches in our small community.
10. The judge's decision to cut the defendants hand off for stealing was overruled by a higher court.

Answers to Post-Test

I. The first ten amendments to the United States Constitution.

II. 1. The right to bear arms.
2. Freedom of speech (press).
3. Right of due process of law.
4. Rights of the states.
5. Unenumerated rights of people.
6. Right of jury trial in civil cases.
7. Rights of accused in criminal cases.
8. Quartering of soldiers.
9. Freedom of religion.
10. Excessive punishments forbidden.

9th Grade Geography

Activities

Unit: The Atmosphere

UNIPACs

1. The Atmosphere - You will define the word atmosphere and give 5 general characteristics. Read: The Wide World, p. 152. Filmstrip: "The Atmosphere."
2. Forming of the Atmosphere - Text: The Wide World. You will trace the development of the atmosphere through the eons of time and present it in a paper detailing at least 4 factors that contributed to the present make-up of the atmosphere. Read: National Geographic, Science Digest, Scientific American, any other resource concerning atmosphere. Filmstrips: "Plants and Reproduction", "Volcanoes", "The Sun and Earth", "Birth of a Planet."
3. Air: The Sum of all its Parts - You will produce a chart showing the components making up air and the approximate percentage of each. List at least 4 major components. Text: General Physics, Science Digest, Scientific American.
4. Climate and You - You will describe, in writing, at least 10 ways climate affects you. Text: The Wide World. The World Around Us, Our World and Its People. Tapes: "Climate and Your Job", "Climate and Food Production", "Climate and the Clothes you Wear", "Climate and Health."
5. The Forecasters - You will prepare a list of at least 5 methods a weatherman uses to forecast the weather. Pamphlet: "The Skills of the Meterologist."

Evaluation

Pre- and Post-Tests:

The pre-test is an indispensable instrument in the systems approach to instruction. It is the outgrowth of the performance objectives, as each item is directly related to the stated objectives. The primary purpose of administering the pre-test is to assess the entry behavior of the students and, consequently, the relevance of the proposed objectives.

It is given at the beginning of the year or, if more specificity is desired, at the beginning of each unit of study. The results indicate which objectives have been mastered by each student, thus providing a most efficient means for the individualization of instruction and/or instructional organization and planning. For example, if pre-tests show that the objectives are not appropriate to a group, it is then possible for the teacher to revise them in terms of group and individual needs and structure the groups accordingly.

The post-test, usually the same test as the pre-test, is the instrument that indicates the extent to which the objectives have been achieved and the need for recycling and revision of former objectives and/or further instruction. (See example on the following pages.)

Planning and evaluating instruction relative to pre-test and post-test results not only assure more effective learning and assessment of student achievement, but also make sound fiscal sense since they provide the output data essential to the determination of cost-effectiveness, relative to educational input. This subject will be discussed further in the following chapter.

Pre-Evaluation - Unit I

The Federal Government

Civics - Grade 8

1. All the following are true about the government established by the Articles of Confederation <u>except</u>:

   a. There was no executive to enforce national laws.
   b. There was no national Congress.
   c. There were no United States armed forces.
   d. There were no national courts.

2. The Articles of Confederation was important for all of the following reasons <u>except</u>:

   a. The Articles established a national government.
   b. The Articles were really our first national constitution.
   c. The Articles brought the colonies closer together.
   d. The Articles gave the Federal government the power to enforce federal law.

3. The Constitution lists all the following <u>except</u>:

   a. The powers of the state.
   b. The powers of the federal government.
   c. Certain things the state must <u>not</u> do.
   d. Certain things the Federal government must <u>not</u> do.

4. The first ten amendments to the Constitution are known as the --

   a. Articles of Confederation
   b. System of Checks and Balances
   c. Bill of Rights
   d. Fundamental Orders

5. All of the following are true about the method of amending the Constitution <u>except</u>:

   a. An amendment may be proposed by Congress.
   b. The states can require Congress to call a national convention to amend the Constitution.
   c. No proposal can become an amendment without the approval of the Supreme Court.
   d. Three-fourths of the states must approve any proposal before it becomes an amendment.

6. All the following are true about the Federal Constitution <u>except</u>:

   a. The Constitution divides the Federal government into two branches.
   b. The Constitution delegates the powers of government to certain branches.
   c. The Constitution guarantees our right as citizens.
   d. All laws passed by state and federal legislatures must agree with the Constitution.

7. All of the following statements comparing the United States Senate and the House of Representatives are true <u>except</u>:

   a. The House has more members than the Senate.
   b. Members of the Senate have a longer term of office than do members of the House.

c. Small states have more power in the Senate than in the House.
d. The age requirements for members of the Senate is lower than for members of the House.

8. The United States Congress is composed of which of these?

a. House of Representatives and Supreme Court.
b. House of Representatives and Senate.
c. Senate and Supreme Court.
d. Legislative, Executive and Judicial branches.

9. All of the following are requirements for the President and Vice-President <u>except</u>:

a. Never have been convicted of a crime.
b. Be at least thirty-five years old.
c. Have lived in the United States for at least fourteen years.
c. Be native born citizens of the United States.

10. The President of the United States is elected <u>directly</u> by

a. Voters in each state.
b. United States House of Representatives.
c. Political parties.
d. Electoral College.

11. Which one of the following lists in the <u>correct order</u> the persons who may succeed to the office of the President?

a. Vice-President, presiding officer of the Senate, Speaker of the House.

b. Vice-President, Secretary of State, presiding officer of the Senate.
c. Vice-President, Speaker of the House, presiding officer of the Senate.
d. Vice-President, Secretary of State, Speaker of the House.

12. Which of the following are the <u>only</u> high officials in the United States who are chosen in general elections?

a. Speaker of the House and President of the Senate.
b. President and Vice-President.
c. President, Vice-President and Speaker of the House.
d. President, Vice-President and Chief Justice of the Supreme Court.

13. If no candidate in a Presidential election receives a majority of the Electoral votes, the person who becomes President is:

a. Chosen by the Supreme Court from the candidates who received the three highest numbers of Electoral votes.
b. Chosen by the House of Representatives from the candidates who received the three highest numbers of Electoral votes.
c. Chosen by the United States Senate from the candidates who received the three highest numbers of Electoral votes.
d. Chosen by the voters in a special election to be held not less than one month nor more than three months later.

14. The United States Employment Service, Social Security Board, and Children's Bureau are parts of the

a. Department of the Interior.
b. Department of Health, Education, and Welfare.
c. Department of Commerce.
d. Department of Justice.

15. The following are duties of the Treasury Department <u>except</u>:

a. Encourage the buying and selling of goods in the United States and abroad.
b. Collects and takes care of money collected by taxation.
c. Coins and prints money.
d. Is in charge of the Coast Guard.

16. All of the following are true about Federal judges <u>except</u>:

a. They are appointed to office by the President of the United States.
b. They may be removed from office by the President.
c. Their appointment must be approved by the United States Senate.
d. They may hold office for life.

17. All of the following are true of the Supreme Court <u>except</u>:

a. There is no jury when the Supreme Court meets.
b. Supreme Court decisions can be appealed to the President.
c. The Supreme Court can declare a bill passed by Congress to be unconstitutional.
d. Justices who disagree with a majority decision may write a statement telling why they disagree.

18. All of the following are true about the Supreme Court <u>except</u>:

a. Justices are appointed by the President.
b. The Senate must approve the appointments.
c. Justices must be lawyers.
d. Cases are appealed from lower courts.

19. The following are steps in a bill becoming a law <u>except</u>:
    a. After a bill is introduced, it is then sent to a committee.
    b. Each house makes its own bills into law.
    c. A committee may report a bill with a recommendation for its defeat.
    d. One house may change a bill sent to it by another house.

20. The process of a bill becoming law includes all the following <u>except</u>:
    a. In case of a veto, both houses must pass the bill by two-thirds majority for it to become law.
    b. A joint committee works out differences between basically similar bills passed by each house.
    c. A bill may be sent back to a committee by each house.
    d. A bill cannot become a law without the President's signature.

9th Grade World Geography

<u>Pre- and Post-Test on Basic Skills</u>

I. Instructions: Write the numeral of the choice which is the best answer.

1. The representation of the earth or part of the surface of the earth is a:

   a. diagram b. map c. chart d. graph

2. The only true map is a:

   a. globe b. projection c. graph d. chart

3. An instrument used to find direction is called a:

   a. sextant b. leveler c. compass d. chronometer

4. The earth's land areas are divided into geographically separate land masses called:

   a. continents b. islands c. peninsulas d. regions

5. On a standard map, which side of center is the direction East:

   a. to the left b. to the right c. at the top d. at the bottom

6. Imaginary lines running North and South, meeting at the poles are used in measuring direction East and West are lines of:

   a. latitude b. longitude c. grid d. parallel

7. Imaginary lines running East and West, parallel to another and used to measure direction North and South are called lines of:

   a. latitude b. longitude c. grid d. meridian

8. A map drawn for a special purpose such as to show true direction or equal area is called a:

   a. chart b. projection c. graph d. globe

9. An information block used in reading the symbols on a map is called a:

   a. legend b. resource c. key d. title

10. A word describing both feet above and below sea level is:

    a. altitude b. elevation c. apogee d. paragee

11. A map showing true direction is called:

    a. mercator projection b. polar projection

    c. earth cutout d. equal area

12. A book of maps is called:

    a. an encyclopedia b. an atlas c. a catalog

    d. a dictionary

13. Average weather for any region is called its:

    a. temperature b. altitude c. climate

    d. isotherms

14. As the elevation above sea level increases then the average temperature:

    a. increases b. decreases c. increases then decreases

    d. remains the same

15. In general, the higher the latitude and the closer one comes to the poles the climate becomes:

    a. warmer b. cooler c. arid d. wetter

II. Use this map to answer the next ten (10) questions.

16. What hemisphere is this continent?

    a. Western b. Eastern c. Northern

    d. Both a and c

17. What meridian runs through the most Eastern part of the continent?

    a. 45th b. 75th c. 115th d. 125th

18. What is the most Western City on this continent?

    a. Blackston b. Wooden c. Lanton

    d. Grantsville

19. All of these are oceans except:

    a. Tand b. North c. Blue d. Elo

20. If it is 2:00 p.m. in Blackston, what time is it in Rand?

    a. 1:00 p.m. b. 2:00 p.m. c. 3:00 p.m.

    d. 12:00 noon

21. What is Goldton's chief resource?

    a. silver b. iron c. gold d. coal

22. Which of these is a tributary of the Adams River?

    a. Carter River b. Jan River c. Elo River

    d. Lowe River

23. Which of these cities would be the continent's most important inland river port?

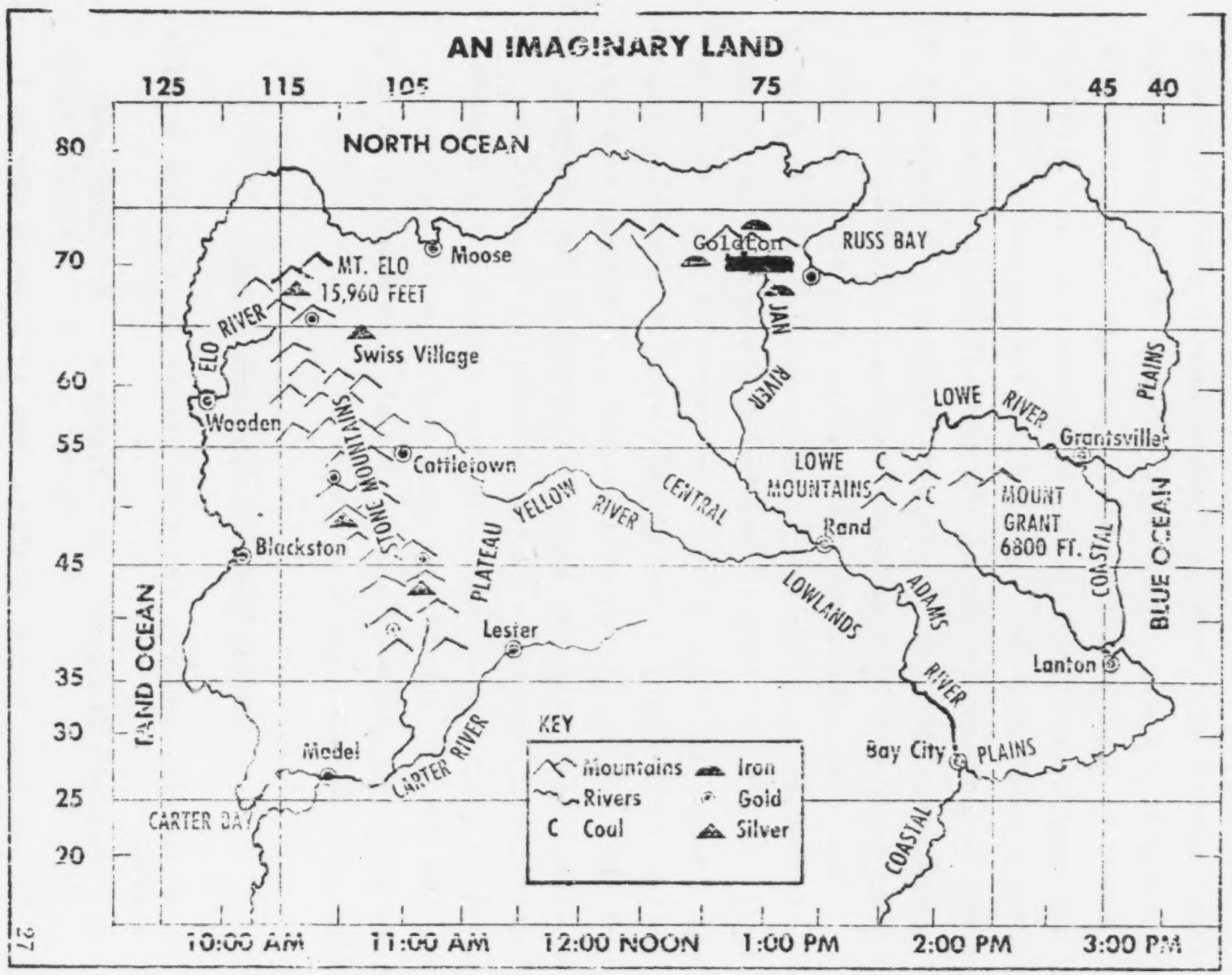
    a. Model b. Rand c. Lester d. Grantsville

24. Which city would be the continent's most important Ocean Port?

    a. Wooden b. Blackston c. Bay City

    d. Grantsville

25. Give at least 2 reasons why you chose these cities in questions 23 and 24.


AN IMAGINARY LAND
125
115
105
75
45
40
80
70
60
55
45
35
30
25
20
NORTH OCEAN
Moose
MT. ELO
15,960 FEET
ELO RIVER
Swiss Village
Wooden
STONE MOUNTAINS
Cattletown
Blackston
PLATEAU
YELLOW RIVER
CENTRAL
Lester
Model
CARTER RIVER
CARTER BAY
RAND OCEAN
Golden
JAN RIVER
RUSS BAY
LOWE RIVER
LOWE MOUNTAINS
C
C
Rand
LOWLANDS
ADAMS RIVER
MOUNT GRANT 6800 FT.
Grantsville
PLAINS
COASTAL
BLUE OCEAN
Lanton
Bay City
PLAINS
COASTAL
KEY
Mountains
Rivers
C Coal
Iron
Gold
Silver
10:00 AM
11:00 AM
12:00 NOON
1:00 PM
2:00 PM
3:00 PM

Soft Data Instruments:

The use of soft data instruments is helpful as an additional source of assessing student growth and determining instructional output. These data consist of the statistical evaluation of questionnaires given to students and teachers, and are used to evaluate those objectives that are difficult to quantify and measure. Because the evaluation of these non-academic objectives is one of the most difficult aspects of any educational program, it is admittedly a weak facet of the PPB system and one that warrants extensive attention.

One such instrument utilized in this study was the "Social Studies Attitude Scale" presented here. The purpose of this scale is to show if and how the students' attitudes change toward the subject over the course of one year's instruction; therefore, it is administered at the beginning and end of the course. It is obvious that, like many sources of soft data, this scale has many shortcomings; for example, it was determined that the vocabulary requires revision for use with sixth grade and some seventh and eighth grade students. Thus, the results should be considered only as a guide to future planning, rather than an unqualified evaluation of a course relative to student opinion.

Social Studies Attitude Scale

1. I am usually under a terrible strain in a social studies class.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

2. I do not like social studies, and if I had a choice I would not take social studies courses.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

3. Social studies is very interesting to me, and I enjoy social studies courses.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

4. The social studies courses I have taken have been fascinating and fun.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

5. Social studies makes me feel secure, and at the same time it is stimulating.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

6. My mind often goes blank, and I am unable to think clearly during social studies class.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

7. I feel a sense of insecurity when attempting social studies.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

8. Social studies makes me feel uncomfortable, restless, irritable, and impatient.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

9. The feeling that I have toward social studies is a good feeling.

   1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly agree

10. Social Studies makes me feel as though I'm lost in a jungle of facts and can't find my way out.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

11. Social studies is something which I enjoy a great deal.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

12. When I hear the words social studies, I have a feeling of dislike.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

13. I approach social studies with a feeling of hesitation, resulting from a fear of not being able to do it.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

14. I really like social studies.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

15. Social studies is a course in school which I have always enjoyed studying.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

16. It makes me nervous to even think about having to do a social studies assignment.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

17. I have never liked social studies, and it is my most dreaded subject.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

18. I am happier in a social studies class than in any other class.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

19. I feel at ease in social studies, and I like it very much.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

20. I feel a definite positive reaction to social studies; it is enjoyable.

    1. Strongly Disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

MAKE SURE THAT YOU HAVE ANSWERED EVERY ITEM!!!!!!

Table 5, a form for summarizing the results of an attitude scale, is shown on the next page. This form was developed for use in the University School's preliminary study. It is included only to suggest a possible format for the intelligible presentation and analysis of such data. Here again, it must be emphasized that conclusions drawn from the data are highly questionable and should serve only as a basis for further investigation of cause-effect relationships by an individual teacher.

The actual administration and evaluation of the results of this scale were planned for the 1970-71 school year by the Chipley team. However, time will not permit a conclusive discussion in this report.

TABLE 5

1970-71 MATH ATTITUDE RESULTS (GRADES 7-12)

Grade Level	Pre-	Post
7	5.5	9.6
8	6.0	9.3
9	10.1	11.9
10	6.0	5.1
11	8.7	9.0
12	5.6	3.5

Sex	Pre	Post
Boy	6.8	7.9
Girl	7.3	8.7

Tea-cher	Pre-	Post
1	8.2	9.4
2	7.4	8.2
3	8.9	13.6
4	6.9	4.6
5	-6.1	11.3
6	-4.0	9.6
7	10.9	6.0
8	-1.9	-2.6
9	15.0	8.4

Course	Pre-	Post
A	8.8	15.1
B	-1.9	-2.6
C	15.6	13.7
D	10.9	6.0
E	-4.0	9.6
F	-6.1	11.3
G	4.2	10.3
H	12.7	11.1
I	-4.2	3.1
J	10.4	6.7
K	3.0	2.2
L	15.0	8.4
M	9.3	6.6
N	-2.8	7.9
O	14.3	11.0

Vet	Pre	Post
<2 yrs.	3.3	5.9
≥2 yrs.	8.2	9.0

Pre-Test: Second day of class in September, 1969
Post-Test: May, 1970
N = 433 (Took both pre- and post-test; a few others took just pre-test; a few others just took post-test.)
20 items on a 5-point scale ranging from "strongly dislike" to "strongly like."

-2 -1 0 1 2

CHAPTER VI

COST ANALYSIS

The major purpose of the Chipley Project, as stated in the proposal and introduction, was to "check the validity of University School procedures and documents in a public school setting and preferably in another discipline." The preceding chapter was concerned with procedures applied to the instructional aspects of PPBS. Accordingly, the social studies program was defined in terms of precise elements of instruction, relative to broad departmental goals. Since it is not within the defined scope of this project to simulate alternative programs or to extend into the realm of cost-benefit studies of rival alternatives, even though these are ultimate aims of PPBS, this chapter will continue by emphasizing the use of procedures and documents as applied to the costing aspect of the proposed social studies curriculum.

Experience with the pilot study greatly facilitated development of worksheets used for data gathering, and as evidenced by the ease of the costing process, the modifications improved on the validity and universality of the procedures and documents. When the Chipley team initiated the costing procedures they first used worksheets developed for the pilot study to collect preliminary data for the summary cost forms. These worksheets are self-explanatory and include questions on course enrollment, time spent per component, travel and miscellaneous expenses, textbook, equipment and supply costs, etc.

The information from these worksheets was easily transferred to the final summary sheets with the aid of instructions

and explanation by the University School team. The costing instructions and forms are presented here for the benefit of those who are interested in pursuing this PPB system.

Costing Instructions

At the end of this year, your department will be asked to report cost data on your instructional program. To facilitate this task and to insure more accurate data, these forms are given to you in August. Please note the enclosed illustrations as well as the following directions.

Form C-1

Item (4) refers to ability group or other formal grouping of students. When you complete your units, enter the names of these units in Item (6). In Item (7), record the number of whole days it took to teach the unit. Ignore Item (8), as this will be calculated by your school PPBS coordinator. Items (9), (10), (11), and (12) cannot be filled out until you have completed other forms.

Form C-2

This form is meant to be self-explanatory; if you have any questions see the department head. Transfer the (D) total to Form C-1, Item (9). Unless you purchase separate textbooks for a single unit, record only the yearly total. All books over four years old are considered to have zero (0) value.

Form C-3

During the course of the year, keep a record of the number of ditto masters and/or mimeo masters you use. This will help you record the appropriate expenditure at A.

Please also record the number of transparencies you make for yourself. This will allow you to complete B.

Keep a record of the number of workbooks, paper backs, newspapers or magazines purchased for your course. This will help you complete C-3. The total of all other consumable supplies should be reported in D. Please report the yearly total only on C-1, unless the cost exceeds $5.00 for any one.

Form C-4

This form is to record all supplies of a non-consumable nature, such as filmstrips. All supplies must be entered on either C-4 or C-3. See department head if you have any questions.

Item (1)	List the name of the item: Those purchased this year and in previous years.
Item (2)	State the price or best possible estimate.
Item (3)	Estimate the years of use: Do not exceed 5 years.
Item (4)	$\frac{\text{Original Price (2)}}{\text{Years of Use (3)}}$
Item (5)	State the number of courses that use this item.
Item (6)	$\frac{\text{Yearly Write-off (4)}}{\text{Number of courses using the item (5)}}$

Please note example of Form C-4. Transfer Total (6) to Form C-1, Item (7).

Form C-5

Please list all equipment used by your classes. Estimate date acquired, Item (2). If over 7 years old, stop here. Other items 7 years old or less must also have entries for Items (3), (4), and (5).

Item (3)	Estimate years of use but do not exceed 7 years.

Item (4) Estimate or actual cost.

Item (5) $\frac{\text{Original cost or value (4)}}{\text{Estimate years of use (3)}}$

In Item (6), list the number of courses that utilize the same piece of equipment.

Item (7) $\frac{\text{Yearly write-off (5)}}{\text{Number of courses item is used in (6)}}$

Total Item (7) and transfer to Form C-1, Item (12).

These directions and enclosed illustrations should answer most of your questions.

These forms do not take care of all expenses (e.g., field trips). The PPBS Coordinator will compute these at a future date. To facilitate his work, please complete Form C-6. If you teach in a self-contained classroom, please complete Form C-7. Illustrations of completed Forms C-6 and C-7 are included in these instructions.

These instructions are intentionally brief; elaborate instructions can cause much confusion. We hope that the instructions and the illustrations of completed forms will explain most of the problems. As difficulties arise, you should consult your PPBS coordinator.

After the data collection and costing forms are completed, all results were summarized for each course (refer to Form C-1) and finally, for the entire department. The summary, entitled "Chipley Project Cost Analysis," is presented in Table 13. Some of the categories in this summary sheet were not discussed in the costing instructions, so a more detailed explanation of these follows:

1. Description of Sections

*Section 1 - Top Level Ability Group

**Section 5 - Low Level Ability Group

(Except for Bridenback. All his sections are heterogeneous.)

TABLE 6

SUMMARY COST FORM: SUB-ELEMENT (C-1)

(1) Element (Dept.) _____

(2) Sub-Element (Course) _____

(3) Teacher (s) _____

(4) Class Status _____

(5) Average Enrollment _____

Component (Unit) (6)	# Days per Unit (7)	Teacher Cost (8)	Text-book Cost (9)	Supplies (10)	Non-consumable Supplies (11)	Equipment (12)	Aides (13)	Other (14)	Total (15)
(16) Course Pre-Post Test & Review									
(17) Non-Instructional Days									
(18) Course Totals									(19) Total Course cost

Items (9) - (14) will need only yearly totals unless you purchase more than $5.00 worth of any of the 6 items for a single unit.

(2) Average cost per pupil _____

TABLE 7

TEXTBOOKS IN PRESENT USE

Department _____ Teacher _____

Year _____

Sub-Element (Course) Textbooks (hardbound)		Code No.	(A) No. of Books on Hand	(B)* Cost of One Book	(C) Total Cost	(D)** 69-70 Input
Name of Course	Name of Book(s)					
		(1)				
		(2)				
		(3)				
		(4)				
		(5)				
		(6)				
		(7)				
		(8)				
		(9)				
		(10)				
		(11)				
		(12)				
		(13)				
					TOTAL	

**A x B = C
C/4 = D

C-2

Disposition: (1) Your file
(2) Department Chairman

*If textbook is over 4 years old, write zero in Columns B, C & D.

Transfer (D) total to Form C-1, Item (9).

TABLE 8

CONSUMABLE SUPPLIES CHARGED TO SUB-ELEMENT

Element (Dept.) _____ Sub-Element (Course) _____

Teacher _____

(1) Number of ditto or mimeo masters reproduced this year (Sept. 1969-June 1970) #_____			
(2) Average Enrollment #_____	Multiply (1) x (2) then multiply result by $.0022 Round to nearest cent. Enter this figure here		A.
(3) Number of transparencies constructed this year. (Sept. 1969-June 1970) #_____	Multiply (3) by $.30. Enter this figure here		B.
(4) Workbooks, paper backs, newspapers and magazines used. Name of book, mag., etc. / Cost of No. 1 Book	Total spent on this item	Determine total cost for each workbook (# of workbooks x cost of each). Sum if more than one workbook, etc. used. Enter total here.	C.
1.			
2.			
3.			
4.			
(5) OTHER (Consumable Supplies)		Enter here	D.
		Sum A, B, C and D to get TOTAL	

*SUPPLIES: A material item of an expendable nature that is consumed, worn out, or deteriorated in use; or one that loses its identity through fabrication or incorporation into a different or more complex unit or substance.

Transfer total to C-1, Item (10)

C-3

Disposition: (1) Your file
(2) Department Chairman

TABLE 9

NON-CONSUMABLE COURSE SUPPLIES

Element (Dept.)_______________ Teacher _______________

Sub-Element (Course)__________

Instructions: Filmstrips, records and other non-consumable supplies costing over $5.00 should be entered here. (Ignore all items over 5 years old.) If your filmstrip, record, etc. cost less than $5.00, it should be reported on C-3, Item D.

Item (1)	Original Price (2)	Years of Use (3)	Yearly Write-off (4)	No. of Courses Using Item (5)	Total $ Charged to This Course (6)
				TOTAL	

C-4

Disposition: Staple to Form C-3 and return to Department Chairman

Transfer Total to Form C-1, Item (7).

TABLE 10

*EQUIPMENT INVENTORY

Element (Dept.) ______________________ School Year ______________________

Sub-Element (Course) ______________________ Teacher ______________________

Item (1)	Date Acquired (2)	Estimate years of Use (3)	Original Cost or Value (4)	Yearly Write-off (5)	No. of courses Using Item (6)	Total $ Charged to This Course (7)
					TOTAL	

EQUIPMENT: A material item of a non-expendable nature, such as a built-in facility, a movable or fixed unit of furniture or furnishings, an instrument or apparatus, a machine (including attachments), an instructional skill-training device, or a set of small articles whose parts are replaceable or repairable, the whole retaining its identity and utility over a period of time which is characteristic of, and definable for, items of its class.

Transfer total to Form C-1, Item (12).

C-5 Disposition: Department Chairman

TABLE 11

PPBS DEPARTMENTAL COSTING WORKSHEET

Department (Element) _____ Year _____

Teacher _____

Miscellaneous Information*

I. Professional Travel & Conferences	Trip 1	Trip 2	Trip 3	Trip 4	
1. Number of days away from classes					
2. Travel Expense					
3. Per Diem Expense.					
4. Substitute Pay (To allow professional travel only).					
5. Other					
					TOTAL

II. In-Service Education	Event 1	Event 2	Event 3	Event 4	Event 5	
Number of days						
1. Substitute Teacher Expense (To allow you to participate.)						
2. Fees & Other Expense paid by School System.						
3. Travel						
4. Other In-Service Expense						
						TOTAL

III. Field Trip Expense	Trip 1	Trip 2	Trip 3	Trip 4	Trip 5	
1. Transportation Expense						
2. Substitute Teacher Expense						
3. Other Field Trip Expense (explain)						
						TOTAL

C-6

GRAND TOTAL _____

*In no case include private expenses made by individual teacher or child.

Transfer total to C-1, Item (14).

TABLE 12

DATA FORM
(Self-contained classes only)

Teacher's Name _____

Grade Level _____

Fraction of time spent on the following subjects:
(These fractions must = 1)

Subject

Math _____

Social Studies _____

English _____

Science _____

_____ _____

_____ _____

_____ _____

_____ _____

TOTAL = 1

Teacher's salary _____
(Please do not fill in: Office use only)

---------- FOR USE OF PPBS COORDINATOR ONLY ----------

Formulae to calculate cost per component:

TABLE 13

CHIPLEY COST ANALYSIS

Teacher	Teacher Cost	Textbook Cost	Consumables	Non-Consumables	Equipment	Teacher Aides	Total	Average Enrollment	Average Cost Per Child	Pre-Post School (10 Days)	In-service (6 Days)	Evaluation (4 Days)	Total Salary (200 Days)
Waller/Presley (Geography)													
Section 1*	967.50	5.30	46.91	17.00	20.32	54.00	1,120.48	30	37.38				
Section 2	967.50	5.30	15.56	17.00	20.32	54.00	1,111.03	30	37.06				
Section 3	967.50	5.30	15.56	17.00	20.32	54.00	1,079.68	30	36.01				
Section 4	967.50	5.30	15.56	17.00	20.32	54.00	1,079.68	22	49.12				
Section 5**	967.50	5.30	15.56	17.00	20.32	54.00	1,079.68	20	54.03				
Study Hall	967.50	--	--	--	--	--	967.50	23	42.10				
TOTAL	5,805.00	35.95	140.50	85.00	101.60	270.00	6,438.05	155	41.57	322.50	193.50	129.00	6,450.00
Savelle (Civics)													
Section 1*	967.50	54.75	14.66	16.00	28.58	38.40	1,119.89	34	32.96				
Section 2	967.50	54.75	14.66	16.00	28.58	38.40	1,119.89	34	32.96				
Section 3	967.50	54.75	14.66	16.00	28.58	38.40	1,119.89	34	32.96				
Section 4	967.50	--	12.94	16.00	28.58	38.40	1,063.42	30	35.48				
Section 5**	967.50	--	12.07	16.00	28.58	38.40	1,063.55	28	37.98				
Study Hall	967.50	--	--	--	--	--	967.50	30	32.28				
TOTAL	5,805.00	164.25	68.99	80.00	142.90	192.00	6,453.14	190	33.99	322.50	193.50	129.00	6,450.00
Gardner (Am. History)													
Section 1*	1,185.00	38.85	90.31	5.32	39.50	36.00	1,394.98	32	43.57				
Section 2	1,185.00	44.75	88.71	5.32	39.50	36.00	1,399.28	35	39.96				
Section 3	1,185.00	38.34	69.34	5.32	39.50	36.00	1,373.50	36	38.14				
Section 4	1,185.00	39.41	70.16	5.32	39.50	36.00	1,375.39	34	40.14				
Section 5**	1,185.00	36.98	1.78	5.32	39.50	36.00	1,304.58	27	48.30				
Study Hall	1,185.00	--	--	--	--	--	1,185.00	29	40.84				
TOTAL	7,110.00	198.83	320.30	26.60	197.50	180.00	8.033.23	193	41.60	395.00	237.00	158.00	7,900.00
TOTAL JUNIOR HIGH SOCIAL STUDIES PROGRAM	18,716.00	398.53	529.79	191.60	442.00	642.00	20,924.42	538	38.91	1,040.00	624.00	416.00	
Bridenback (Geography)													
Section 1	907.50	45.45	3.08	15.00	19.55	10.00	1,000.58	28	35.72				
Section 2	907.50	35.60	2.20	15.00	19.55	10.00	989.85	20	49.48				
Section 3	907.50	37.53	2.42	15.00	19.55	10.00	992.00	22	45.08				
Section 4	907.50	42.51	2.97	15.00	19.55	10.00	997.53	27	36.93				
Section 5	907.50	38.53	2.53	15.00	19.55	10.00	993.11	23	43.17				
Section 6	907.50	43.50	2.53	15.00	19.55	10.00	998.08	23	43.29				
TOTAL	5,445.00	243.12	15.73	90.00	117.30	60.00	5,971.15	143	41.73	302.50	181.50	121.00	6,050.00
TOTAL CHIPLEY PROGRAM	24,165.00	642.15	545.52	281.60	559.30	702.00	26,895.57	681	39.50	1,342.50	805.50	537.00	
% of TOTAL	90.75	2.2	1.8	.95	1.9	2.4							

2. Teacher Cost

These figures represent the teacher cost for each section for the 180 days of instructional time, and the total cost for that period. The formulae used for these calculations were:

a) $\text{Daily Cost} = \dfrac{\text{Yearly Salary}}{200 \text{ (days)}}$

b) $\text{Cost of each section for 180 days} = \dfrac{\text{Yearly Salary} - \text{Cost of 20 days}}{\text{Number of Sections}}$

(The cost of 20 days would be 1/10th of the annual salary or, 20 x the daily cost derived from "a")

For example, in the first case:

a) $\text{Daily Cost} = \dfrac{\$6,450}{200} = \$32.25$

Cost of 20 days = 20 x \$32.25 = \$645.00

b) $\text{Cost of each section for 180 days} = \dfrac{\$6,450 = \$645.00}{6} = \$967.50$

(Note: Some columns do not balance exactly because the numbers were rounded off.)

3. Textbook Cost

This cost per section is calculated on Form C-2. The procedure is clearly stated in the directions on the form. The figure on the Cost Analysis Sheet reflects the 1969-70 input only.

4. Consumables

Form C-3 is provided for this information. In the main, this cost includes materials that are expendable and cannot be re-used, such as ditto masters, workbooks, etc. Frequently, these costs must be estimated, since refinements in accounting and control are required for more precision.

5. Non-Consumables

These are items that last several years. Specific criteria for their identification are stated on Form C-4. The cost of the items is calculated

for a one-year period by prorating it over the estimating life-span of the item. The total cost of the item is divided by the estimated years of use to arrive at the final figure.

6. Equipment

   The same procedures as those used to inventory and prorate non-consumables are repeated on Form C-5.

7. After the costs are totaled and the enrollments are determined, the average cost per child may easily be calculated.

The remainder of the Cost Analysis Summary shows a distribution of the cost of the 20-day non-instructional period over specific areas. These costs should account for one-tenth of the total annual salary.

In order to provide a concise summary of expenditures, the cost of the Chipley Program may be broken down as follows:

180-Day Cost Summary		
	Teacher Cost	$24,165.00
	Total of Other Costs	2,730.57
	Total Cost for 180-Day Program	$26,895.57
Total Cost for 20 Non-Instructional Days (4 teachers)		2,685.00
Grand Total for Chipley Program (200 Days)		$29,580.57

The percentage of the total outlay that was expended on each category over the 180-day period is shown at the end of the summary sheet.

As stated at the beginning of the discussion of the cost-analysis, the intent of this task was not to undertake a cost-benefit study of alternative instructional programs,

but rather to validate the prescribed costing procedures and documents in a public school setting. However, the cost analysis of the Chipley Middle School social studies program provided an excellent (and rare) opportunity to study various aspects of the cost of the existing program. Such an analysis might result in new insights and give rise to several interesting observations, questions, and conclusions that could be the basis for revision and improvement of the program. Of course, without the necessary program output data the evidence is inconclusive and many of the inferences may be erroneous.

Some of the observations made by PPBS team members and consultants in school finance concerning this cost-analysis summary are listed below:

1. Compare expenditures for equipment, supply, etc. with the amount spent for in-service, etc.
2. Consistently, all teachers spend less on supplies in the low ability sections. This certainly raises questions.
3. The uniformity of most expenditures would seem to indicate that very little adaptation is made by teachers in spite of the extreme form of ability grouping.
4. Caution must be observed when making an evaluation of cost to determine the quality of the program. For example, one teacher because of years of experience and academic training will automatically increase the cost of programs over a teacher with less years experience and academic training, but it does not necessarily guarantee that you will have a better program.
5. The method of purchasing materials and supplies is not indicated, but could make a significant difference in costs. For example, if a central supply room is established, the costs would be more uniform than if each department does its own purchasing.
6. The high percentage expended for teacher salaries indicates that the variable expenditures under

the control of school personnel are extremely small. Unless this fact is changed, there would appear to be no reason for extensive teacher involvement in cost analysis. On a random basis the cost procedures can be extremely valuable, however.

CHAPTER VII

FEASIBILITY STUDY

Two of the most important considerations when undertaking a project such as this are 1) the accurate assessment of what funds are required to execute the project, and 2) whether the outcomes justify the resources expended to achieve the objectives. Because of the dearth of experience at the inception of an original project, these considerations are problematic and must necessarily be given special attention. It is difficult, if not impossible, to account for all factors such as personnel, materials, time expenditures, etc. in the initial planning, and budgeting amendments must be made accordingly.

However, an effort will be made to present some of the essential elements considered in the planning of this project and in the evaluation of the input-output relationship. Table 14 summarizing approximate costs of the Chipley Project and a brief explanation of the categories follow. The second consideration of the feasibility study (mentioned above) might be determined and expressed more effectively by the evaluator of this project.

Direct Costs

The total sum of the Title V Grant for the entire project was $37,136.00. These funds were to be allocated to the appropriate accounts for the satisfaction of the dual purpose of the project, part of which was to be conducted at the University School and part at the Chipley Middle School, Washington County. Because of this overlap, it is difficult

to accurately separate the direct costs into two budgets; however, this sum is felt to be an adequate representation of actual expenditures for the Chipley phase. The Summary Sheet, Amendment #2, is presented with the original proposal in Appendix A.

TABLE 14

SUMMARY OF COSTS OF CHIPLEY PROJECT

Cost		Total
Direct		$12,200.00
Indirect		
Teacher	$1,225.00	
Administrative	$525.00	
Clerical	$20.00	1,770.00
Volunteered Services		
Consultants		240.00
Estimated Cost of Project		$14,210.00

Indirect Costs

Besides direct costs, the indirect costs incurred must be considered. By definition, indirect costs are those actual or budgetary costs that are not readily identified with a specific program, service, function, or department. In addition, many able and highly-paid individuals donated their services to this project. We feel that estimates should be made both of the indirect costs and of the value of donated services. Indirect costs are a drain on other school programs and many districts/schools will have to pay for the same services which were free to us.

Teacher Time:

A form was devised for use in estimating the teacher time and cost. This form is shown in Table 15 on the following page. Whether this time is uncompensated or release time is provided, it becomes a cost of considerable magnitude.

Administrative Time:

The school principal also directed the project. Three per cent of his time was devoted to the Chipley Project; therefore, three per cent of his salary would be an indirect cost.

Volunteered Services:

In addition to the preceding indirect costs, many other professional people were involved in this project. They volunteered time and service that under different circumstances might have incurred a direct cost.

Although the indirect costs are nominal in this case, they are included here because they could reach more extensive proportions and could result in a real cost to another school or district attempting a similar project.

TABLE 15

PPBS TIME SHEET (CHIPLEY PROJECT)

Teachers Name _____

(Place estimate of time under appropriate column)

DATE	Bi-weekly Meeting	Behavioral Objectives	Cost Analysis of Course	Goals & Objectives	Articulation &/or Evaluation of Scope & Sequence	School Budgeting	Final Report	Other (Please specify	DAILY TOTAL
TOTAL									

CHAPTER VIII
EVALUATION OF CHIPLEY PROJECT

Can processes developed for instructional management in a unique educational environment be implemented in a public school setting? Are the procedures and documents utilized appropriate to the processes? And, finally, can these processes effect improved instructional management in public schools?

This document represents an evaluation of the applicability of PPBS procedures and documents, developed for the University School, to replication at the Chipley Middle School, so that (1) responses to the above questions may be determined, and (2) administrative decisions can be made concerning future plans. It should be noted that this evaluation is based on data gathered from in-depth interviews with University School Team members and from a detailed study of relevant documents and reports. A careful review was made of forms and documents used by the Chipley Team, but there was no attempt to gather either subjective or objective data directly from Chipley School administrators, faculty, or students. In spite of this limitation, however, it is believed that sufficient information was collected on which to formulate reasonably sound and impartial professional judgments.

<u>Can processes developed for instructional management in a unique educational environment be implemented in a public school setting?</u>

It is to the credit of both the University School and Chipley School PPBS teams that the processes developed for

the one setting were not only implemented in another, but were carried out in a discipline differently oriented from the original.

In Chipley School, the planning aspect of PPBS involved the following processes: orientation (a critical first step to the complex planning process), setting of departmental and teacher goals, determination of objectives within a framework of scope and sequence, and the writing of performance objectives in behavioral terms. Programming involved the determination of appropriate activities to accomplish and evaluate objectives, the categorization of related activities, and the allocation of resources to activities. To implement PPBS budgeting processes, the Chipley Team utilized appropriate costing procedures.

It is apparent that the processes developed for instructional management at the University School were implemented in Chipley School. But problems of adequate planning time, in-service training, etc. need to be resolved before genuine success can be realized. More research is needed, also, before generalizable results can be obtained. Nevertheless, it appears that the processes involved in PPBS, with modifications and revisions, may be as feasible to implement in public schools as in university schools.

Are the procedures and documents utilized appropriate to the processes?

A careful study of relevant procedures and documents utilized at Chipley School was made by this evaluator. The procedures used were those which are generally accepted as desirable, necessary, and integral to decision-making via the PPBS approach. It is noteworthy that an additional procedure, namely training sessions for writing performance objectives, was included when the need for such was recognized;

it is possible, however, that need assessment procedures were not sufficiently addressed during this project.

Documents used at Chipley School embraced a wide variety of forms, worksheets, models, etc. for purposes of identification and evaluation of units, for determination of scope and sequence, for writing performance objectives, for evaluation of student progress/attitudes, for costing data, etc. The documents employed were well-conceived and designed to be easily understood and fairly simple to use.

It is believed that the procedures and documents used at Chipley School were highly appropriate to the processes implemented.

Can these processes effect improved instructional management in public schools?

In a world of increasing social and educational change, the concept of accountability promises to exert an ever-greater influence on education. Systematic coordination of the elements of planning, programming, and budgeting can provide a device to aid accountability, and can further result in improved educational practices, the facilitation of curriculum development, greater educational output, desirable changes in pupil and teacher behavior, and the more effective use of financial resources. Through the processes in this project, teachers gained desired, and desirable, decision-making powers, while the cost was minimal. Thus it is reasonable to believe that instructional management in public schools can indeed be effected and improved by the processes implemented at Chipley School.

It will not be an easy task, however. A wide scope and variety of problems must be recognized and faced and resolved--problems with administrators, school boards, teachers, and yes, even students; problems of traditional

organizational and administrative patterns; problems hidden in attitudes and perceptions; and a host of others. Some of these problems were evidenced during this project: lack of planning time, increased teacher work load, lack of involvement of appropriate publics, etc.

It will take time and careful effort to improve instructional management in the public schools; it is a long-range program. But it is firmly believed that a highly desirable beginning has been made with the processes implemented in this project. Both the University School and the Chipley Middle School are to be commended for their efforts thus far; the educational community looks forward to potential long-term benefits when the final process and product evaluations of this pilot project are known.

Dr. Bernice Scott
Associate, Planning and Design
Duval County School System

CHAPTER IX

CONCLUSION

Upon the completion of a project of this magnitude, it is difficult for one, or few, to adequately evaluate the total outcome to which so many people contributed. The abstruse effects upon individuals are indeterminable.

At best, one can revert to the accomplishment of the objective of the project as a means of appraisal and justification. Surely it has been demonstrated that the procedures and documents developed in the original PPBS project were easily utilized in a public school setting. Further, although a formal survey was not conducted, it was stated by the persons closely associated with the project that the experience, both from a theoretical and pragmatic point of view, justified the costs.

The Chipley team has tentatively planned to extend this system, through their own efforts, into another subject area, and possibly throughout the county in the area of social studies. They also have begun planning changes in budgetary procedures, accordingly.

As director of this project, I would like to emphasize its invaluable contributions to the area of instructional management. The scope of this area extends from classroom teachers to administrators and finally to entire school districts. A project of this nature specifically identifies all essential components of an instructional program and provides the professional educator with the body

of information required for intelligent decision-making and program planning relative to prescribed educational goals.

APPENDIXES

APPENDIX A

PROJECT PROPOSAL

APPENDIX A

PROJECT PROPOSAL

The University School, The Florida State University, received an ESEA Title V Grant for the fiscal year 1969. The grant was awarded to explore the possibility of implementing Planning-Programming-Budgeting System at the school level.

The original proposal was to establish a Planning-Programming-Budgeting System for the University Laboratory School. It soon became apparent that this would be a massive task that might very well take four or five years and many thousands of dollars that were not available. Furthermore, it was generally agreed by this staff and the funding agency that the project should be limited as much as possible to ensure a quality product. Depth not breadth, was desired. It also was apparent that if we could develop the process and procedures for one discipline, future expansion would be greatly facilitated. For these reasons the University School Planning-Programming-Budgeting System Model is concerned only with that part of its instructional program that is classified as mathematics.

Program structure, objectives, and account codes have been established for the total school program but cost and instructional inputs, outputs and the procedures necessary to get these have only been developed for the math program K-12. This has been an enlightening experience and expansion into other disciplines will be facilitated by this experience.

Admittedly, mathematics is perhaps the easiest area to work with, and frankly, it was chosen with that in mind. However, we are optimistic that evaluation in all areas will be greatly improved in the near future. To be sure, there are many more problems that we have not yet confronted due to the limited scope of this model.

The University School has an enrollment of approximately 900 students and 58 teachers in its K-12 program. The costs and instructional inputs and outputs explored by this project are only those associated with the mathematics program K-12.

This project was completed in a unique school environment. While the major thrust of this project was to explore the feasibility and utility of Planning-Programming-Budgeting System for management of this school, steps were taken to ensure that our processes and documents could be used, with adaptation, by the public schools of Florida.

We propose to cost out and write behavioral objectives for all disciplines during the 1969-70 school year. We feel, at this point, our documents are well enough developed that the work will progress rapidly and we will be able to complete these programs by January 1, 1971. At this point all programs should be operative for the 1971-72 school year. The support programs, dual accounting and other non-instructional programs could be prepared the following year, making total implementation possible for the 1972-73 academic year.

We further propose to work with one county going through the entire procedures developed in this year's project. (Project submitted with this proposal.) This would entail selecting one discipline in the selected county and going through the entire procedures that the University School developed. The major purpose in this process would be to evaluate the project and to check the relevance of all documents for more extensive implementation.

The Planning-Programming-Budgeting System lends itself well to augmenting the influence of the State Department of Education in school finance. The above procedure would

be essential in preparation for standardizing procedures statewide.

The project being considered is two-fold:

1. To work through one county with the system already developed.
2. To implement all programs in the University School, The Florida State University.

Activities

Proposal for University School

It is proposed that the Planning-Programming-Budgeting System team and University School personnel conduct the necessary planning and take steps necessary for costing out and writing behavioral objectives in all disciplines in preparation for the implementation of a Planning-Programming-Budgeting System.

The University School activities will be the same as those which will be undertaken by the county system with the exception that the University School would be applying Planning-Programming-Budgeting System to all disciplines.

To carry out the prescribed program effectively, it is, of course, necessary to utilize a tremendous amount of time toward its organization and implementation. In addition to the time element, funds are needed for certain supplies and services to fully implement this proposed program. We submit the following budget:

AMENDMENT #2 PROJECT 70002

SUMMARY SHEET

Acct. #	Present Budget	Additions or Deletions	Amended Budget
	Funds for Transfer (3030)		
2214	11,030.00	-0-	$ 11,030.00
2216	2,000.00	-1,000.00	1,000.00
2221	8,736.00	-0-	8,736.00
2660	1,734.12	-0-	1,734.12
2260	2,500.00	-1,000.00	1,500.00
2250	-0-	300.00	300.00
	Funds to Remain in Washington County		
2216	1,000.00	400.00	$ 1,400.00
2220	2,500.00	-400.00	2,100.00
2250	2,135.88	-300.00	1,835.88
2262	500.00	-0-	500.00
2270	5,000.00	2,000.00	7,000.00

ESEA TITLE V
SECTION 503
AID TO COUNTIES
PROJECT BUDGET

FISCAL YEAR: 1970 ADMINISTERING COUNTY Washington

DATE: October 6, 1970 APPLICATION AND PROJECT NUMBER 70002 PROJECT TITLE PPBES Project between Washington County & University School, FSU

PROPOSED BUDGET OF PERSONNEL AND EXPENDITURES (USE ADDITIONAL FORM(S) IS NECESSARY) FOR FISCAL YEAR ENDING JUNE 30, 1970

FEDERAL ACCOUNT NUMBER	STATE ACCOUNT NUMBER	ITEM #	DESCRIPTION	OBJECT OF EXPENDITURE (Round all amounts to nearest dollar) SALARIES (1)	CONTRACTED SERVICES (2)	TRAVEL (3)	EQUIPMENT RENTAL (4)	EQUIPMENT PURCHASE (5)	LAND & BLDG. RENTAL (6)	OTHER EXPENSES (7)	TOTAL EXPENDITURES (8)
	3030		Funds To Be Transferred To The University School At Florida State University For Expenditures as Follows:								
200	2214	1.	Planning-Programming-Budgeting Coordinator	11,030.00							11,030.00
200	2216	2.	Substitutes	1,000.00							1,000.00
200	2221	3.	A. Key Punch Operator B. Secretary II	4,368.00 4,368.00							4,368.00 4,368.00
800	2660	4.	Fixed Charges: Personnel Benefits for Clerical Staff & Coordinator							1,734.12	1,734.12
200	2260	5.	Travel & Per Diem			1,500.00					1,500.00
200	2250	6.	Teaching Materials & Supplies							300.00	300.00
			Funds To Remain In Washington County								
200	2216	7.	Substitute Teachers	1,400.00							1,400.00
200	2220	8.	Clerical Salary	2,100.00							2,100.00

ESEA TITLE V
SECTION 503
AID TO COUNTIES
PROJECT BUDGET

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DATE: October 6, 1970 APPLICATION AND PROJECT NUMBER 70002 PROJECT TITLE PPBES Project between Washington County & University School, FSU

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200	2250	9.	Teaching Materials & Supplies							1,835.88	1,835.88
200	2262	10.	Printing of Instructional Materials							500.00	500.00
200	2270	11.	Contracted Services		7,000.00						7,000.00
			TOTALS	24,266.00	7,000.00	1,500.00				4,370.00	$37,136.00

Rationale

For some time pressures have been mounting for developing program budgets in education. These pressures have come from state government and the U.S. Office of Education. There is now evidence that Florida School Districts may soon be asked by the State Legislature and the State Planning Commission to implement Planning-Programming-Budgeting System. This will be a difficult task since Planning-Programming-Budgeting System has had very limited study by educators. Therefore, we feel that our efforts might be of value to Florida School Districts. Hopefully, if a Planning-Programming-Budgeting System is adopted in our state, this work will make some contributions toward its successful implementation.

The Laboratory School, The Florida State University, has recently undergone a very careful internal evaluation and analysis by its professional staff and initiated an external evaluation by some of the most outstanding educators in the nation. These activities resulted in a new emphasis being assigned to research and development.

The proposed Planning-Programming-Budgeting System project appears to be consistent with this stated goal and lends itself to augmenting the influences of the State Department of Education. Model programs, readily accessible to the State Department of Education personnel and visitors to the Capitol would provide not only a product in the form of a document but a window to the processes whereby the product was created. Both seem important in the light of research findings concerning the processes of change in education.

APPENDIX B

GLOSSARY

APPENDIX B

GLOSSARY

Activities.--While program categories or program subcategories express objectives, activities are the means of achieving these objectives.

Alternatives.--Possible means of achieving objectives. Alternatives are evaluated in terms of costs as related to outputs. Additional consideration includes the time required for implementing each alternative and the uncertainties inherent in selecting any one alternative.

Behavioral Objective.--Statement of instructional objectives in behavioral terms. The exact behavior expected of the successful learner under certain conditions of performance is carefully spelled out so that achievement can be measured. The desired outcome for every component unit is carefully defined in behavioral terms.

Budgeting.--The activity through which funds are requested, appropriated, apportioned and accounted for.

Cost-Effectiveness Analysis.--A means of relating the cost of a particular activity or project to effective performance or goal attainment. The decision-maker may choose from among feasible alternatives on a basis of least cost and greatest effectiveness.

Criteria.--Measurements which are used to examine the relative degrees of desirability among alternatives or the degree to which a course of action meets an intended objective.

Crosswalk.--The expression of the relationship between the program structure and the State Department of Education classification of object expenditures. A simple table listing program categories vertically and State Department of Education classification horizontally. This table allows collection of cost by program and also by object classification as required by state law.

Evaluation.--Comparison of desired outcomes or objectives with actual accomplishments; based upon educational performance indicators, such as indices that measure changes in pupil cognitive development.

Goal.--A broad direction, general purpose, or intent. A goal is general and timeless and is not concerned with a particular achievement within a specified time period.

Input-Output Analysis.--An economic technique designed to examine the effect of changes in certain input variables to the outcome or output variables of the system under study; a form of systems analysis. Inputs are the resources employed to achieve objectives. Outputs are the products of a program, often expressed numerically.

Management Information System (MIS).--Integrates the dynamic functions of an organization such as instruction, personnel, and finance, and provides computer-aided systems of information control for administrators. It may be a reporting system or a decision-making system, depending on the level of application.

Model.--An abstract representation of reality through which actual problems may be simulated for evaluation and prediction. Models trace the relationship between inputs and outputs, resource and objectives, of the alternatives compared, so that state officials can predict the relative consequence of choosing any alternative.

Objectives.--Objectives are desired accomplishments which can be measured within a given time frame. Achievement of the objective advances the system toward a corresponding goal. Accordingly, objectives that support and contribute to the achievement of the established goals must be developed.

Planning-Programming-Budgeting System (PPBS).--A conceptual approach to decision-making; emphasizes outputs, program activities, and accomplishment relative to predetermined objectives, long-range planning, economic rationality, and systems analysis for decision-making.

Programs.--Programs are defined as a group of interdependent, closely related services or activities progressing toward or contributing to a common objective or set of allied objectives. It is a package of related activities.

Program Structure.--A program structure is a hierarchical arrangement of programs which demonstrates the relationship of activities to goals and objectives. The structure contains categories of activities with common output objectives.

Program Codes.--Programs are coded by number to facilitate the collection of program data costs, and statistics in a format consistent with the program structure. These data are used to control program expenditures, evaluate program effectiveness in terms of stated objectives, and to analyze the cost effectiveness of alternative programs.

Program Budget.--The program budget in a PPBS is a statement of policy that relates costs to goals, objectives, and programs based upon a program structure classification. When

the goals and objectives of a school district have been defined and the programs to meet these objectives have been documented, the estimated costs of these programs must be reported in the Program Budget.

Planning.--The study of objectives, of alternative ways of achieving objectives, of future environments, and of contingencies and how to respond to them. The purpose of planning (or analysis or evaluation) is to explore alternatives, to stimulate ideas about trade-offs and management strategies, to identify problems to formulate theories, and to generate data.

Programming.--A method or system of describing activities according to objectives or "outputs" and of relating these objectives to the costs in people as well as dollars or "inputs" needed to produce the outputs.

APPENDIX C

SAMPLE PERFORMANCE OBJECTIVES

APPENDIX C

SAMPLE PERFORMANCE OBJECTIVES

6th Grade Geography

I. The Study of Earth Forms - Exploring Our World

1. To develop in students a knowledge of major oceans of the earth, their names and locations.

   A. As shown by locating 4 major oceans of earth on a globe, listing their names and the names of at least 2 continents each one touches.

   B. So that each child uses a globe and correctly lists the 4 oceans and at least 6 continents correctly.

2. To develop in students a knowledge of the existence of major ocean currents and the paths they follow.

   A. By showing with directional arrows on a teacher-given map, the courses of the Gulf Stream, the Japanese Current, and the Labrador Current, using any materials available.

   B. So that at least 70% of all students are able to correctly represent the three currents by drawing directional arrows on a teacher-given map, and all students can identify, on the globe, the general areas in which the three currents flow.

3. To develop in students a knowledge of how the major oceans of the earth affect the climate on adjacent lands.

   A. As shown by listing at least 2 ways in which these oceans affect climate in their surrounding regions, such as rainfall, storm formation, or temperature moderation.

   B. So that not less than 70% of students are able to list at least 2 ways in which these oceans affect climate in their surrounding regions.

4. To familiarize students with the names, locations, and relative size of the seven continents.

   A. As demonstrated by labeling all 7 continents on a teacher-given map, without reference to any outside material, and by categorizing them into larger and smaller ones.

B. So that all students are able to correctly label not less than 6 continents and are able to categorize all seven as larger or smaller than a teacher-given continent with 100% accuracy.

5. To display a knowledge of landforms in general, such as mountains, plains, and valleys.

   A. By correctly labeling a series of teacher-given pictures depicting representative landforms.

   B. So that all of the students will correctly label at least 80% of the given pictures.

6. To develop an understanding of forces and processes which produce mountains.

   A. By writing a brief description of how each of the 3 major type (volcano, fault-block and folded) mountains are formed, without reference to any outside materials.

   B. So that each child can correctly describe at least 2 of the 3 processes by which mountains are formed.

7. To demonstrate knowledge of the properties and formation processes of different kinds of rocks.

   A. By examining a rock collection and listening to rock collector explain how rocks are classified and formed.

   B. So that at least 70% of the class will actively participate in a class discussion in which the properties and formation processes of igneous, sedimentary, and metamorphic rocks are listed and described.

II. Map Skills

1. To develop in students the ability to identify symbols on physical maps.

   A. By labeling all symbols selected by the teacher on a teacher-made map without reference to any materials.

   B. So that not less than 70% of all students are able to correctly identify at least 90% of symbols on a teacher-made map.

2. For students to demonstrate a knowledge of the following types of maps: Physical, political, economic, populaton and land use, and to identify examples of each.

A. As demonstrated by labeling at least 2 samples of each type of map on a teacher-given test, without reference to any materials.

B. So that not less than 80% of students are able to correctly identify and label not less than 70% of the 10 sample type maps given on the test.

3. To develop in students a knowledge of the use of longitude and latitude in locating a particular point on a map.

A. As demonstrated by locating 5 points given by the teacher on a teacher-given map and correctly identifying the longitude and latitude of each point, without reference to any materials.

B. So that 80% of the students are able to correctly locate at least 4 of the given points and correctly identify the longitude and latitude of each point.

4. To demonstrate a knowledge of global hemispheric divisions and locations of selected countries and cities.

A. By writing the correct hemispheric location for 10 cities named by the teacher, without reference to any materials.

B. So that at least 70% of all students will correctly locate 70% of the cities named by the teacher, and all students will correctly locate at least 50% of the cities.

5. For students to demonstrate a knowledge of special terms used in geography.

A. By matching 20 geographical terms such as, peninsula, gulf, plateau, canal, and island to their correct definitions on a written test without reference to any materials.

B. So that not less than 80% of all students correctly match at least 75% of the terms with their definitions on a teacher-made test.

C. As shown by each student constructing a map of an imaginary continent with 5 of 10 terms such as, island, peninsula, and canal from a teacher-given list correctly drawn and labeled.

D. So that at least 70% of all students correctly illustrate 5 of 10 given terms on a student-constructed map.

9th Grade World Geography

Unit 1

1. GENERAL OBJECTIVE: Students will demonstrate their knowledge of essential geography skills in order for the teacher to evaluate the direction of a pre-planned course of study.

   EXPECTED BEHAVIOR: The students will take a teacher-made objective geography skills pre-test covering the essentials in these areas: vocabulary, map and chart reading, having no reference base.

   EVALUATIVE PROCEDURE: No standard score is expected. However, a score of 85% or better on each specific test area will exempt the student from having to cover phases within units containing these skills. All non-exempt students must complete each unit with the course of study.

2. GENERAL OBJECTIVE: Students will reveal their attitude towards school, social studies and geography.

   EXPECTED BEHAVIOR: Students will take an attitude test designed to show how they feel (positive, negative or neutral) about school, social studies, and geography.

   EVALUATIVE PROCEDURE: The teacher will interpret data on each student's attitude from computer read-outs and compare that score against a standard score derived from the Middle School Pre-Test on attitudes and note degree of change of attitudes as tested at a lower grade level.

3. GENERAL OBJECTIVE: Students will demonstrate their present level of knowledge in the areas of geography to be covered in the year's course of study.

EXPECTED BEHAVIOR: Students will take a teacher-made, objective pre-test on geography covering areas such as, the atmosphere, the aquasphere, the geosphere, ecology, environment vs. technology and scientific theories, which will be given as a post-test at the end of the course of study.

EVALUATIVE PROCEDURE: The teacher will note the differences in class average scores from both testings. An improvement of over 10% on the class average pre-test score will show that the course objectives have been met.

4. GENERAL OBJECTIVE: To enable students to become familiar with the working tools and the function of the geographer.

EXPECTED BEHAVIOR: Students will be given a syllabus showing filmstrips, tapes, film loops, transparencies, readings and other resources and materials available to them concerning land masses and countries and bodies of water. Each will review these sources and select 2 major land masses such as Europe or Africa and 1 major body of water (oceans) and write 3 or more important facts about these lands and waters each concerning the following topics: 1) size, 2) location, and 3) world importance.

EVALUATIVE PROCEDURE: A teacher-made multiple choice test based solely on the resource base and grading of student papers by teacher. Seventy-five per cent of students will score C- or better on the paper and 70% or higher on the test.

LIST OF REFERENCES

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